

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

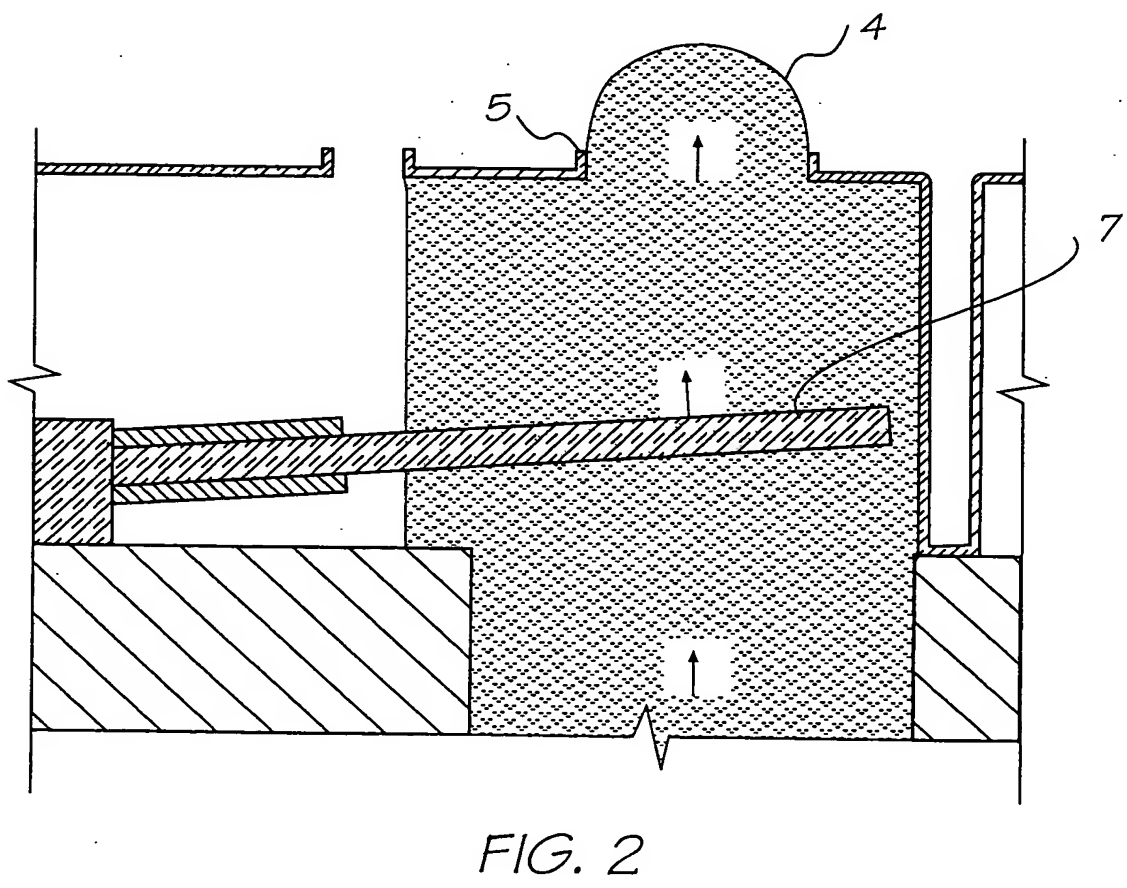
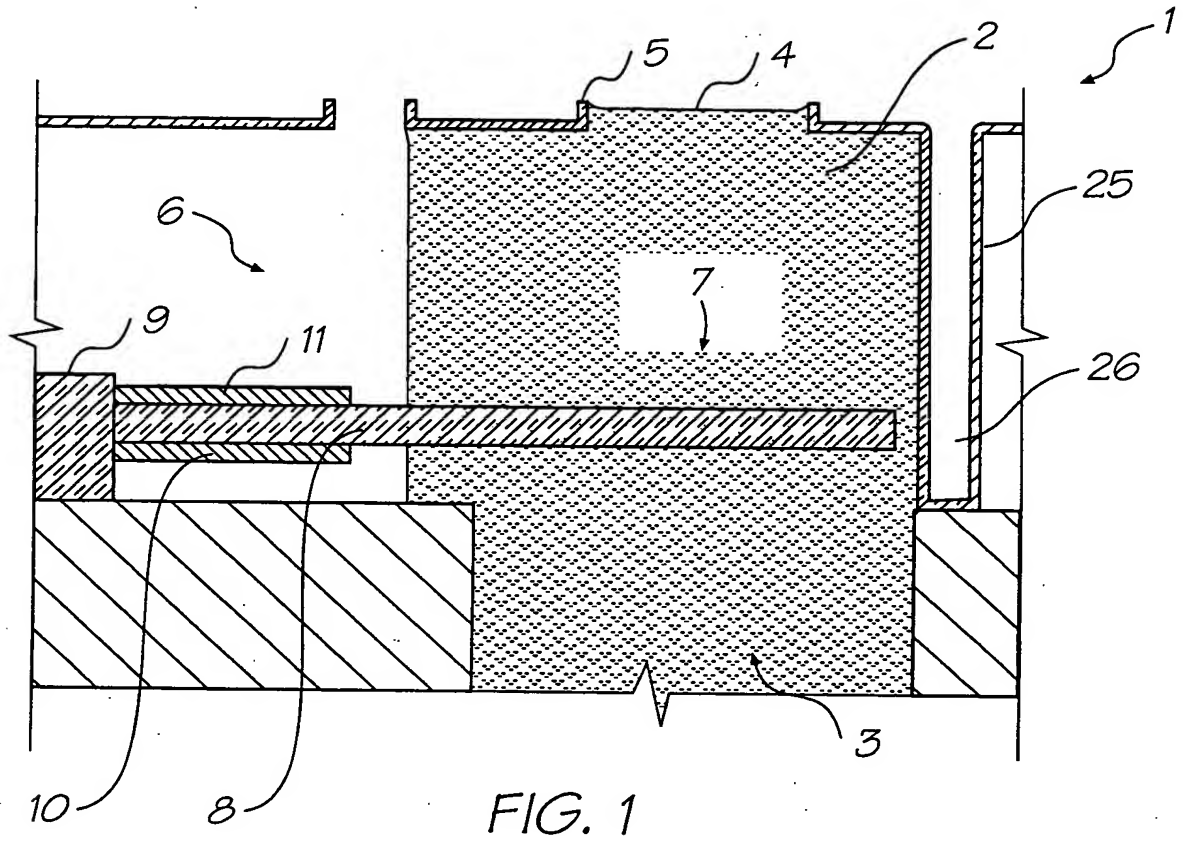
Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**



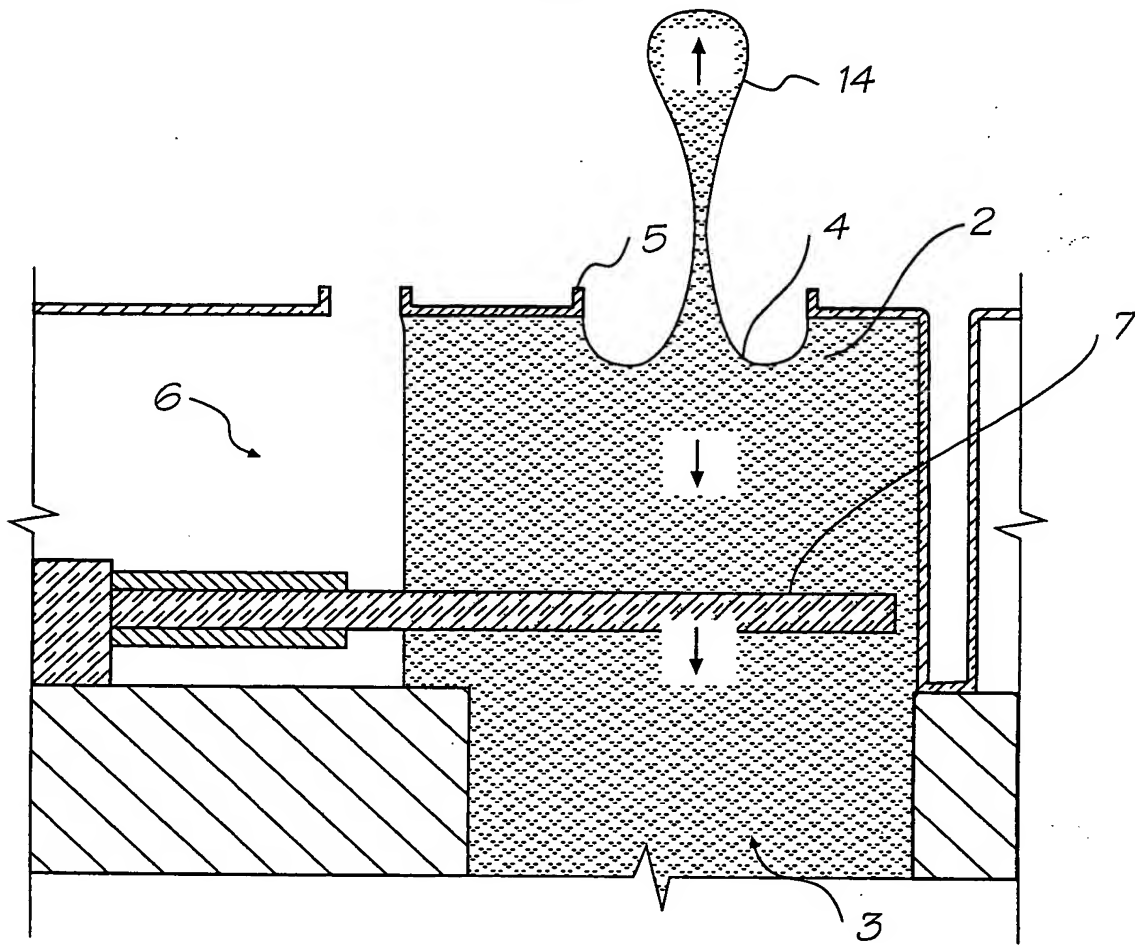
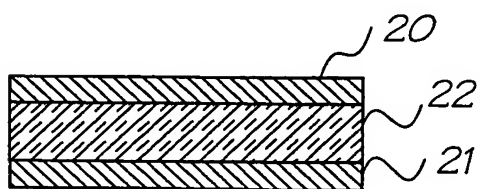


FIG. 3



↓ Cooling

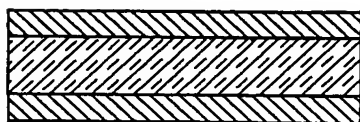
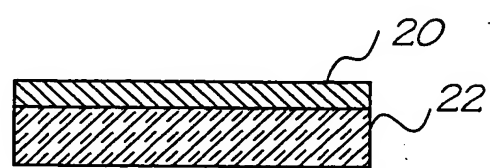


FIG. 4



↓ Cooling

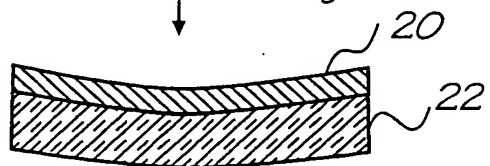


FIG. 5

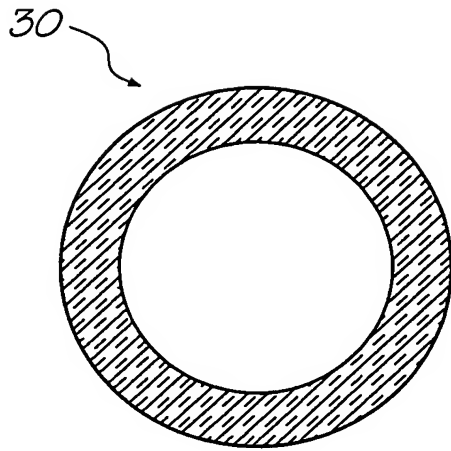


FIG. 6

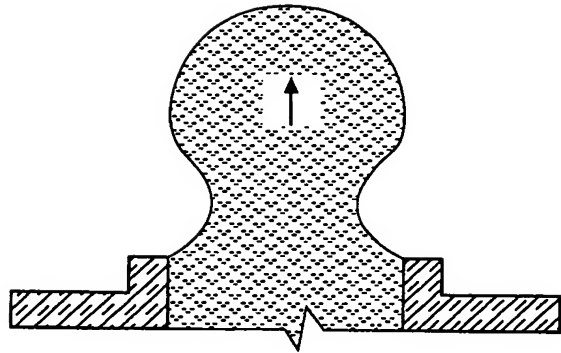


FIG. 7

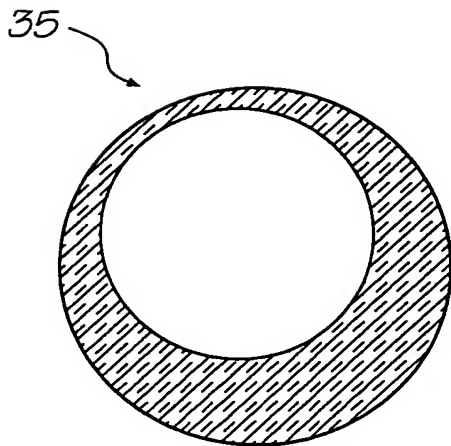


FIG. 8

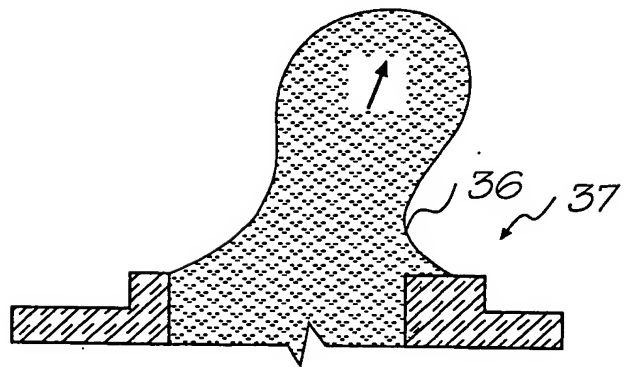


FIG. 9

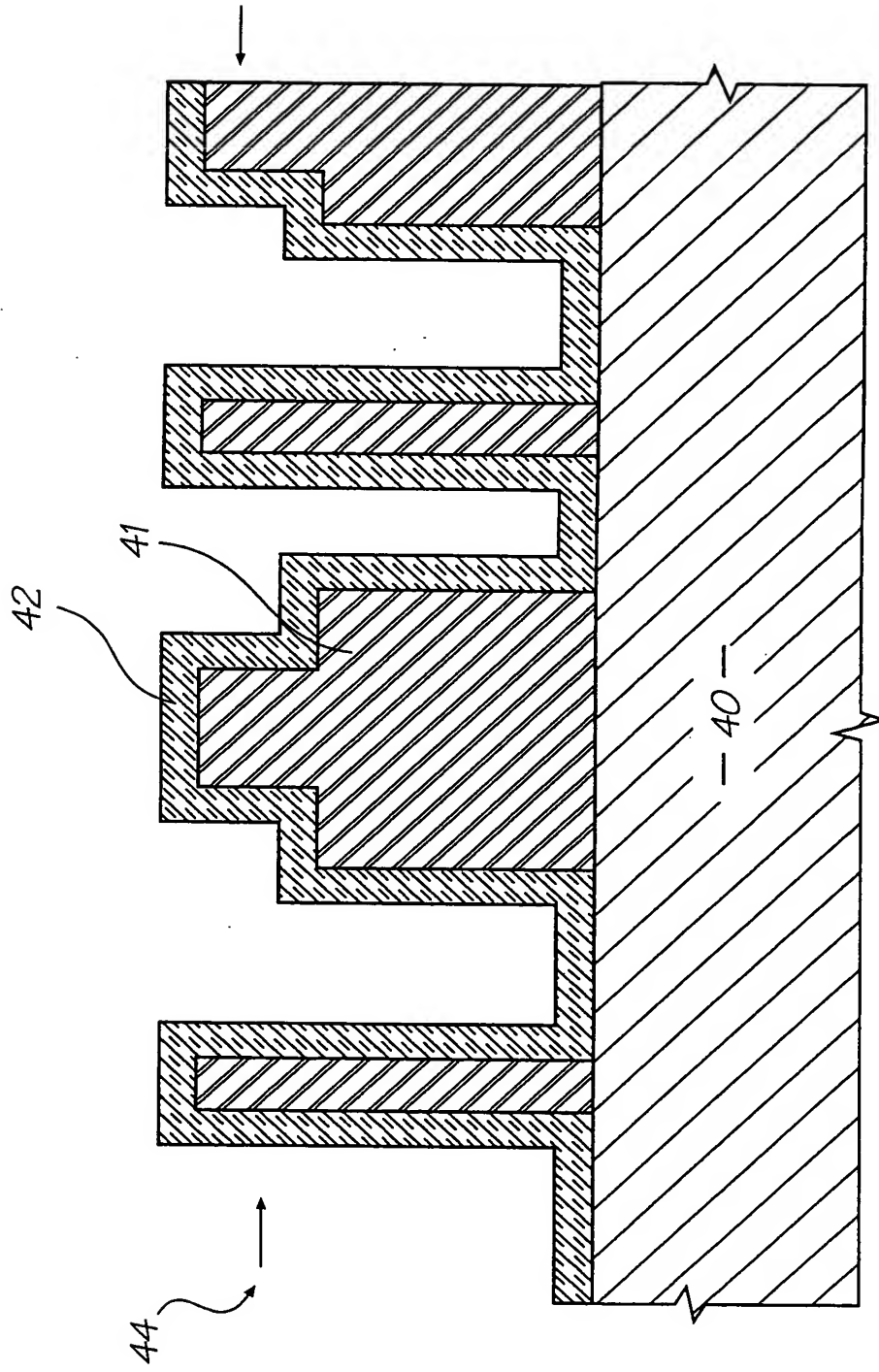


FIG. 10

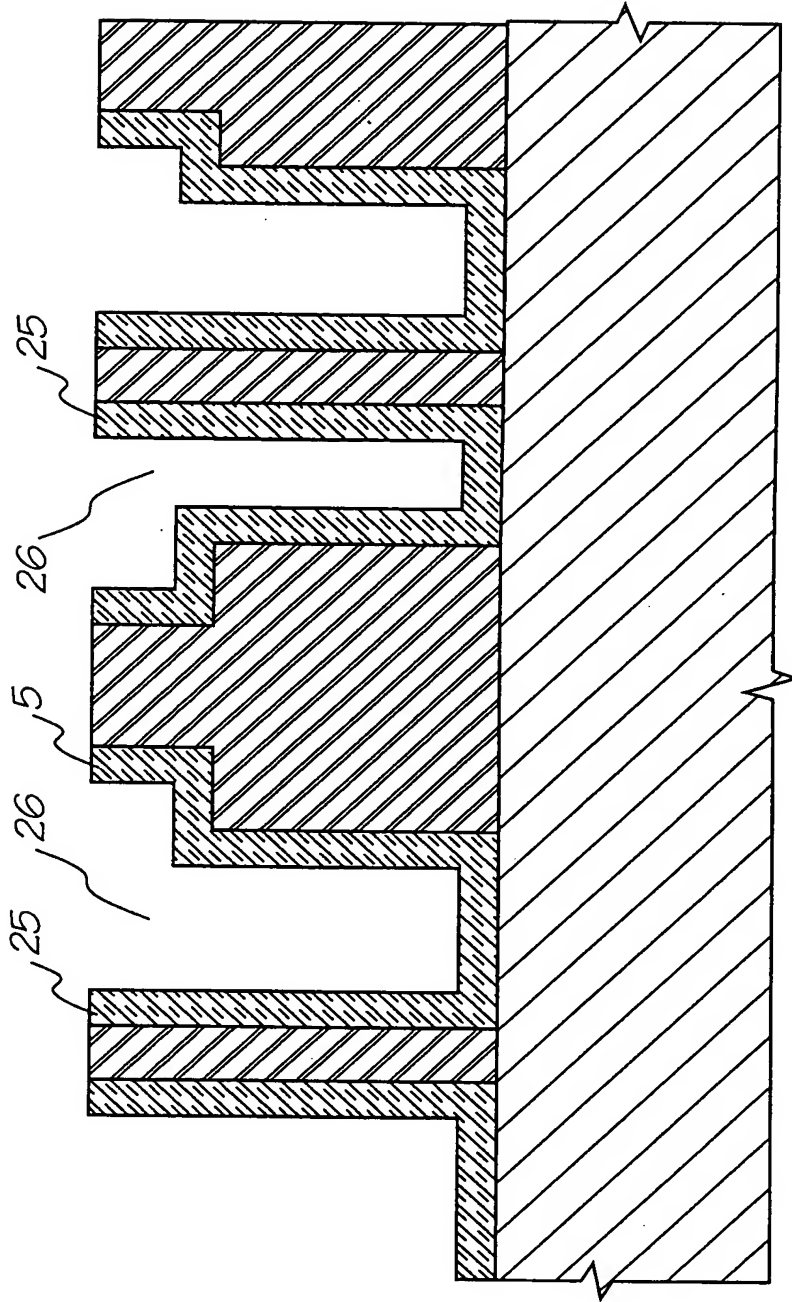


FIG. 11

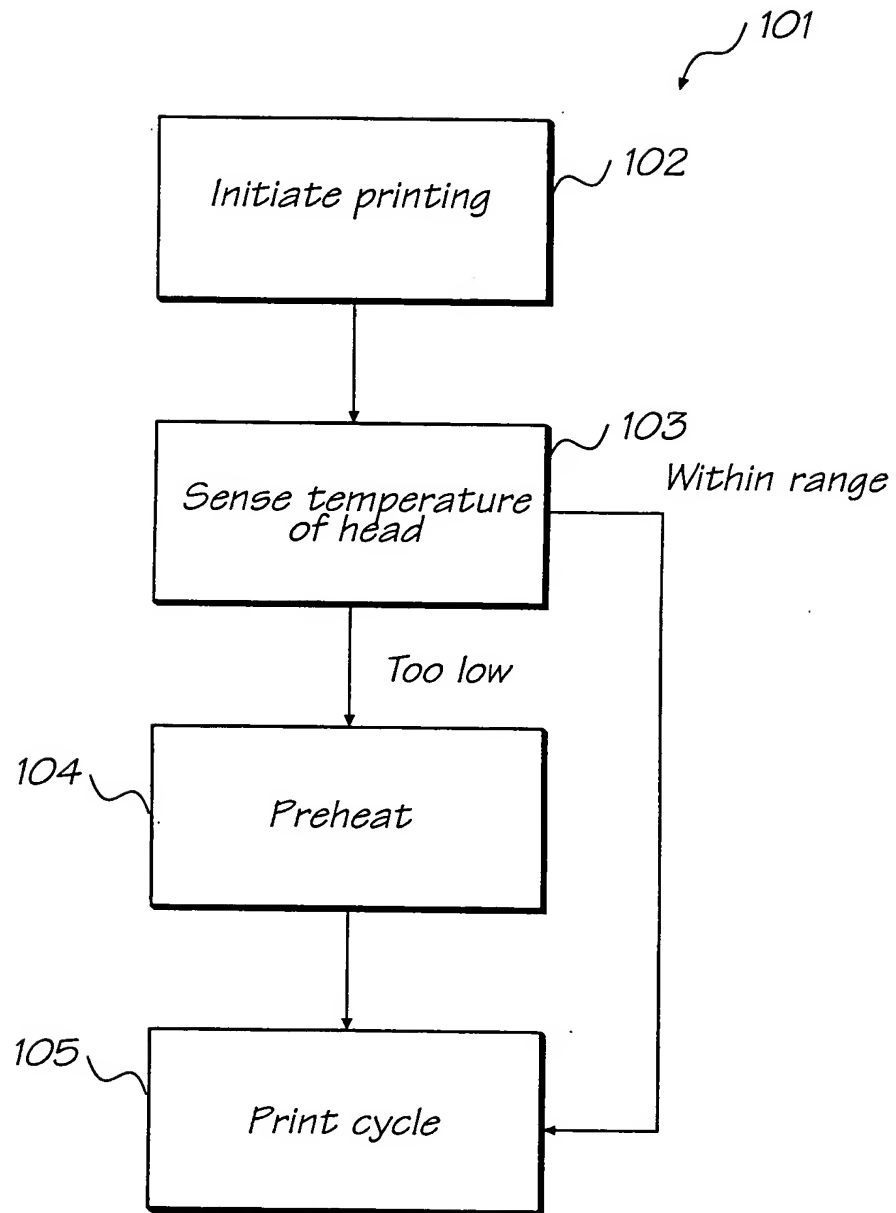


FIG. 12

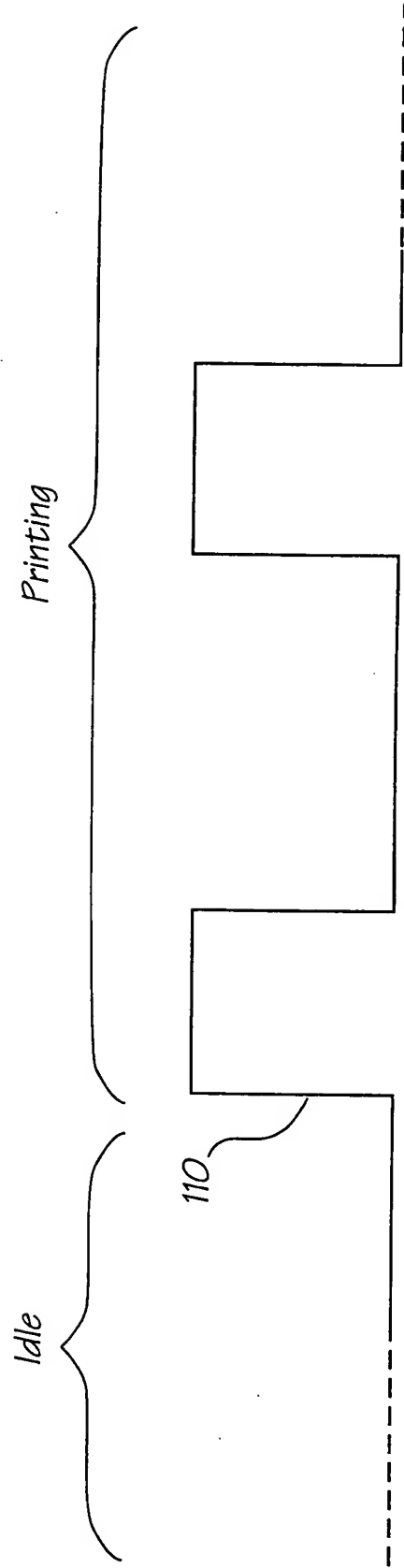


FIG. 13

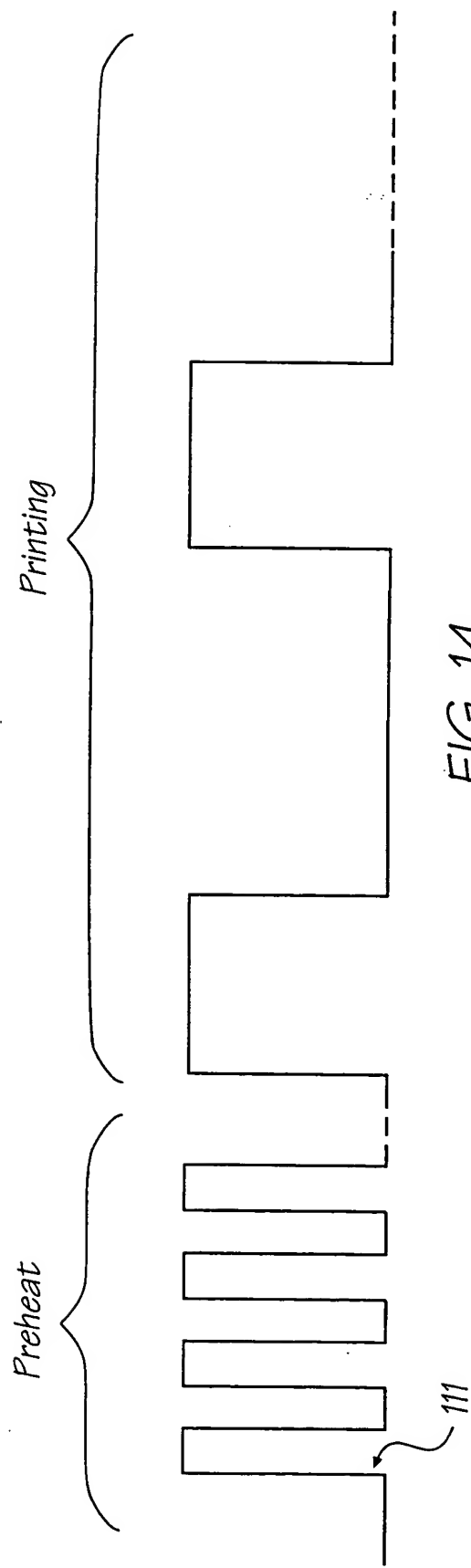


FIG. 14

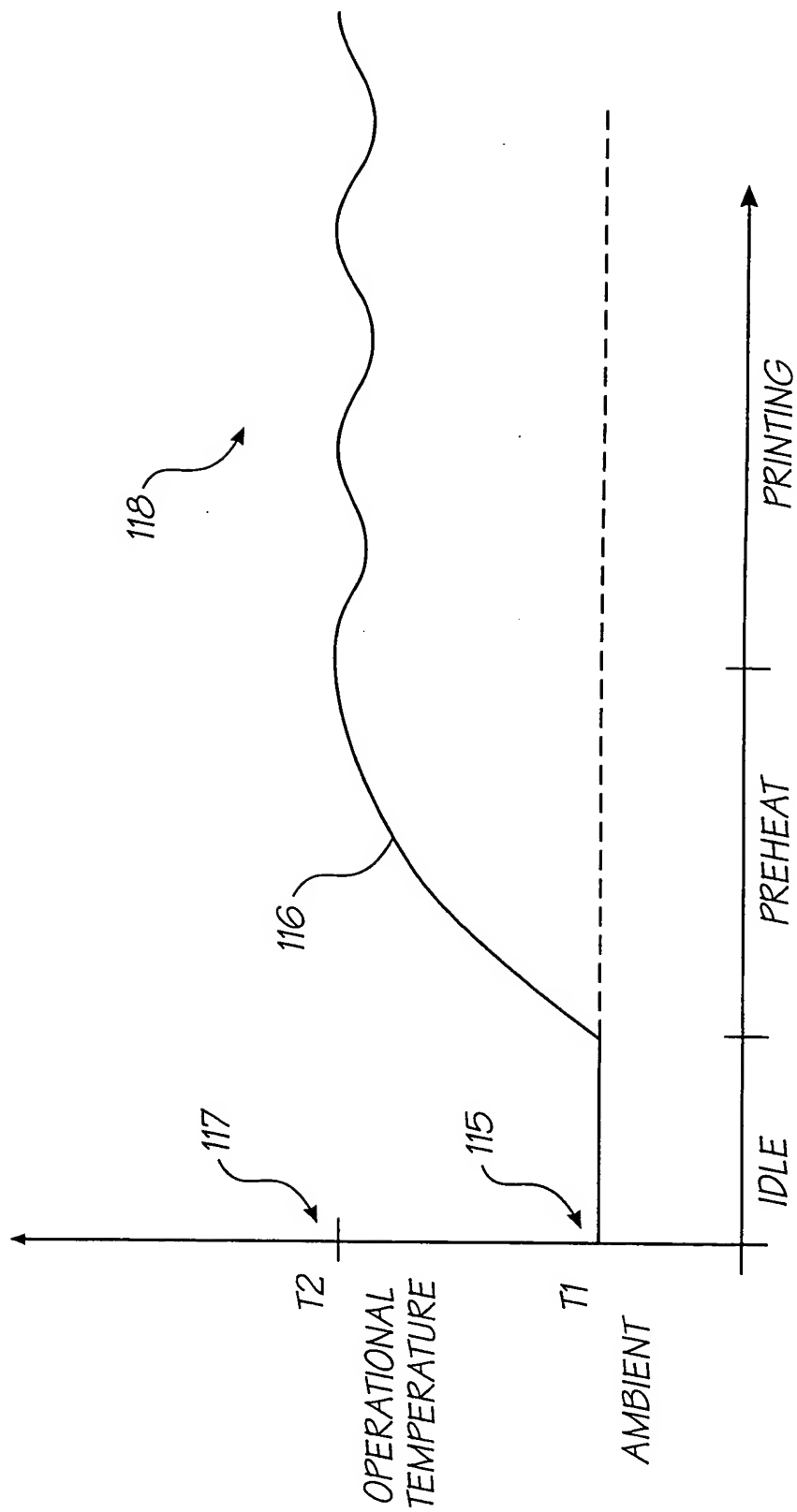


FIG. 15

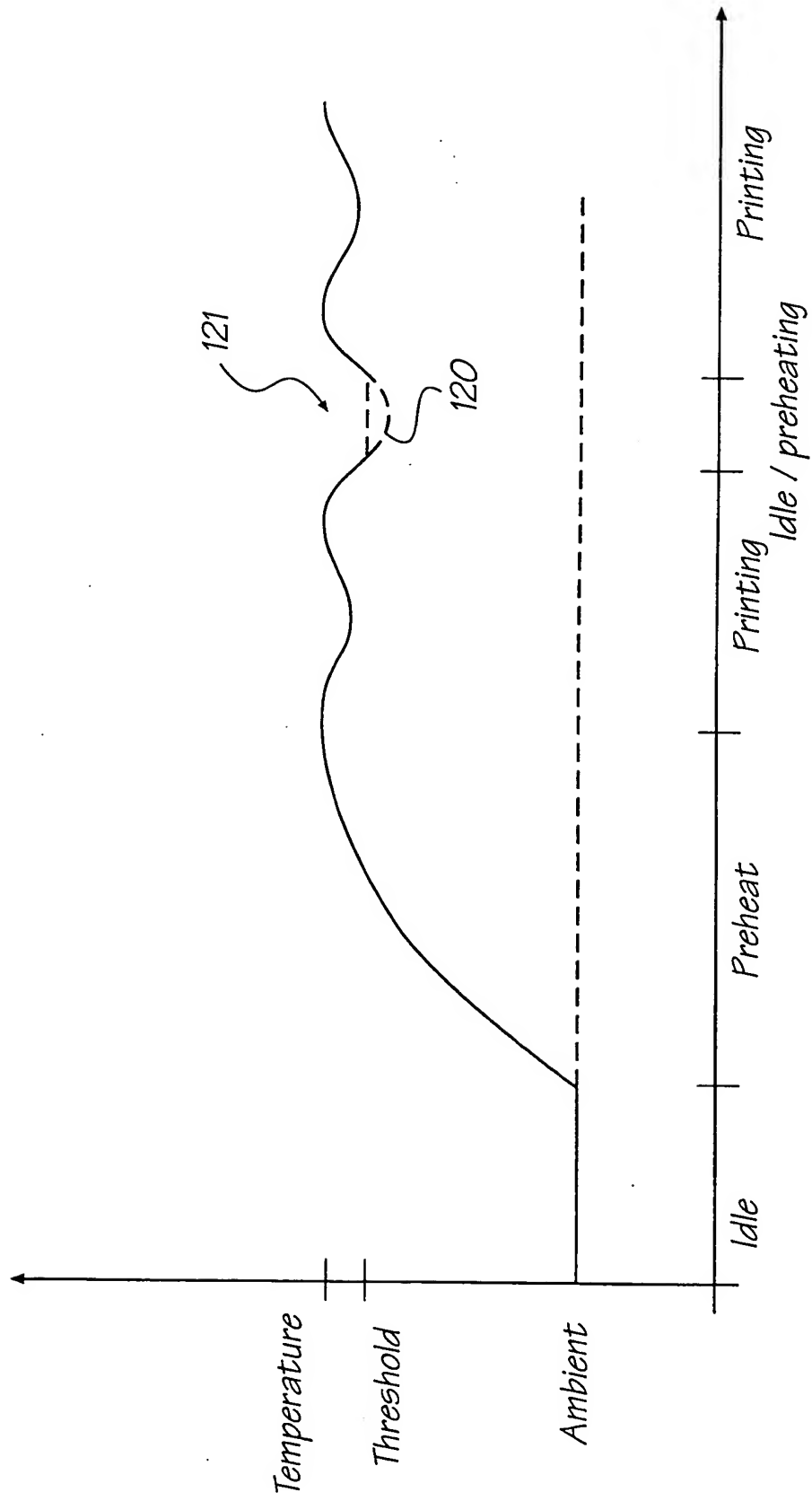


FIG. 16

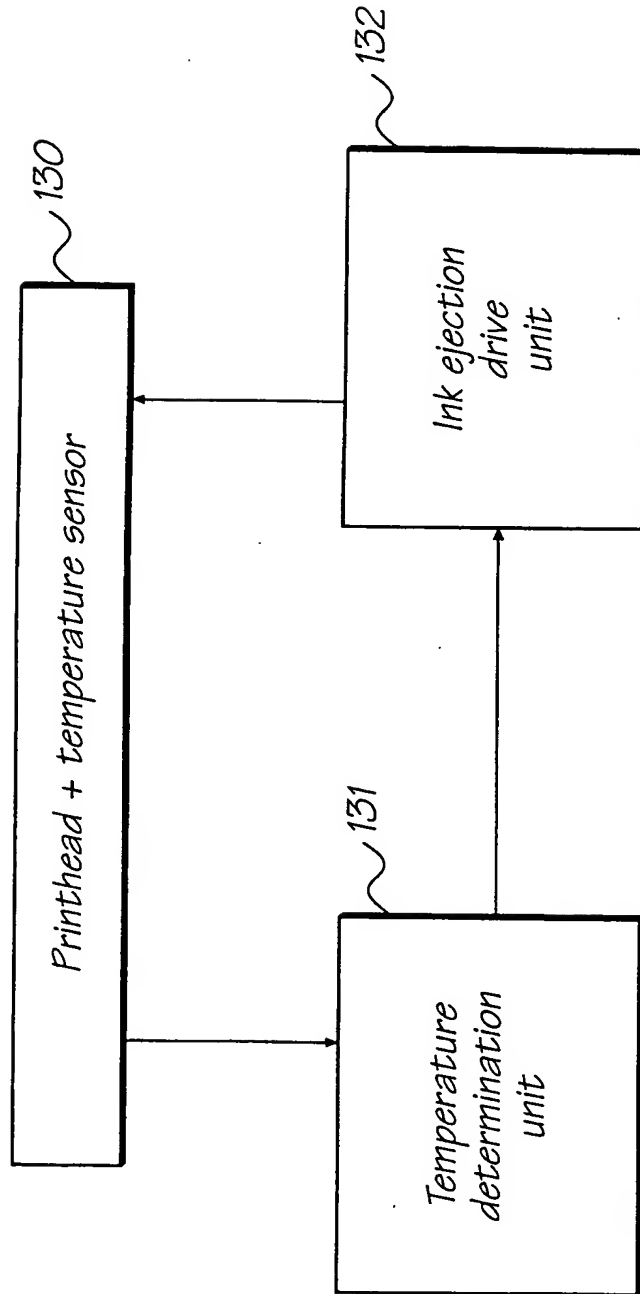


FIG. 17

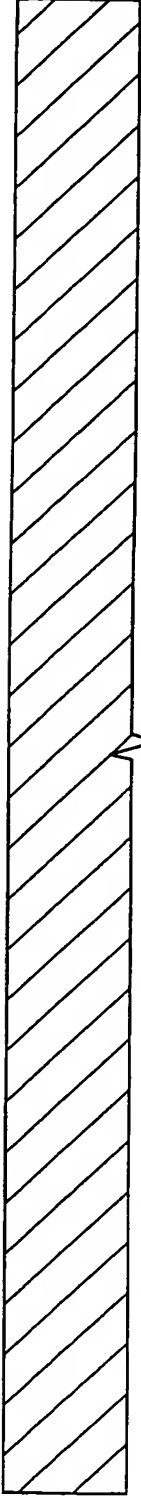
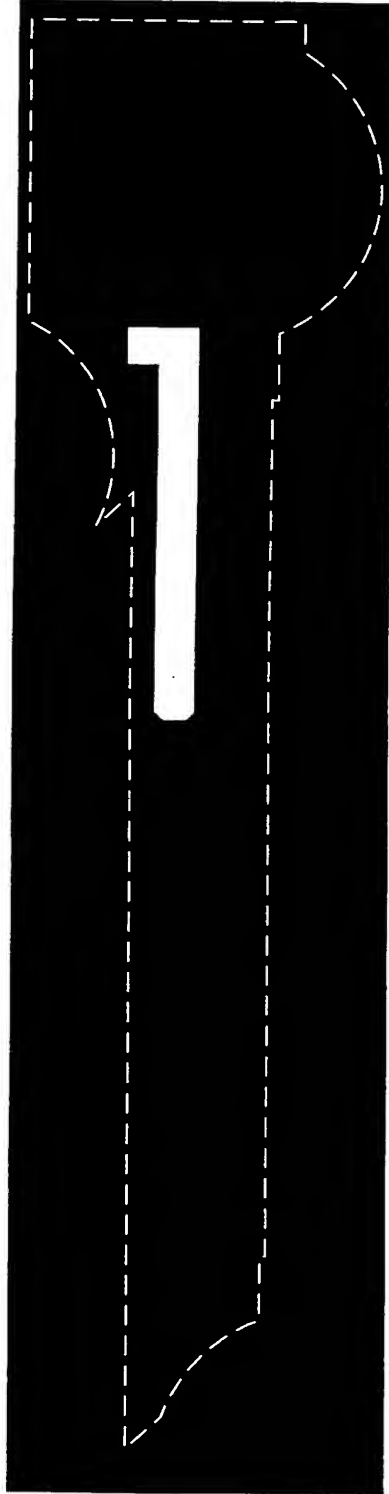
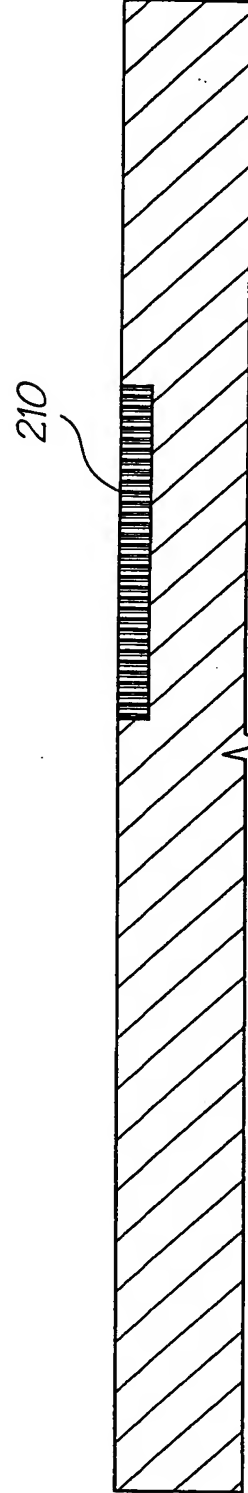


FIG. 18



N-Well mask

FIG. 19



Implant N-Well

FIG. 20

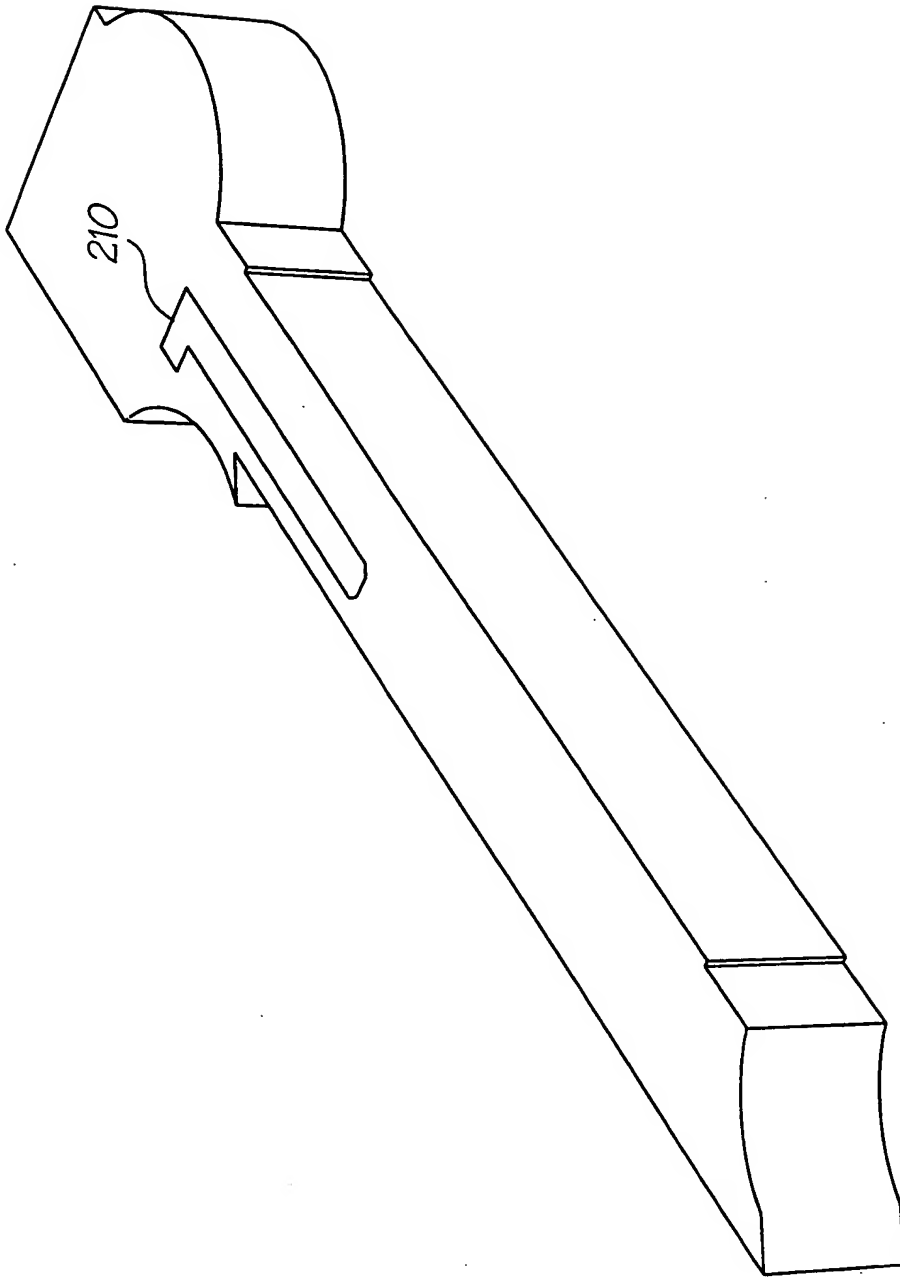
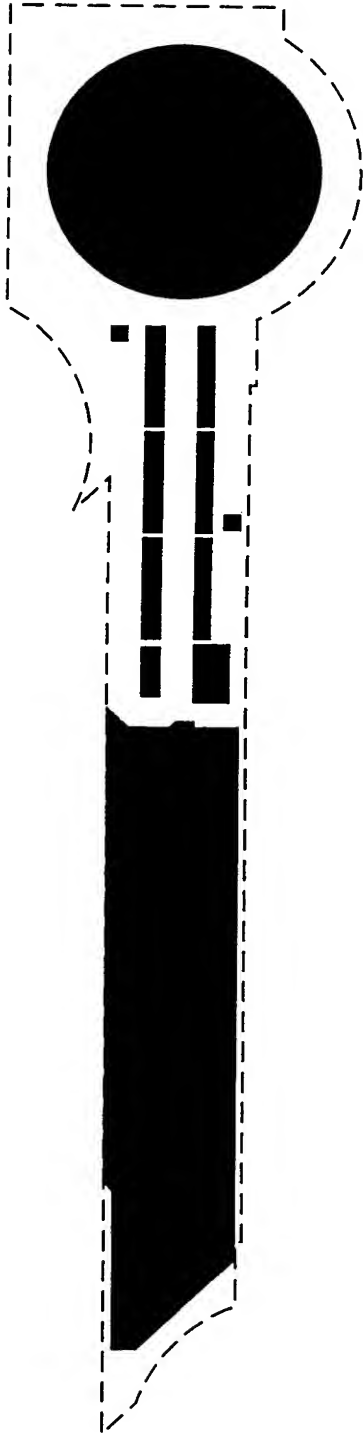
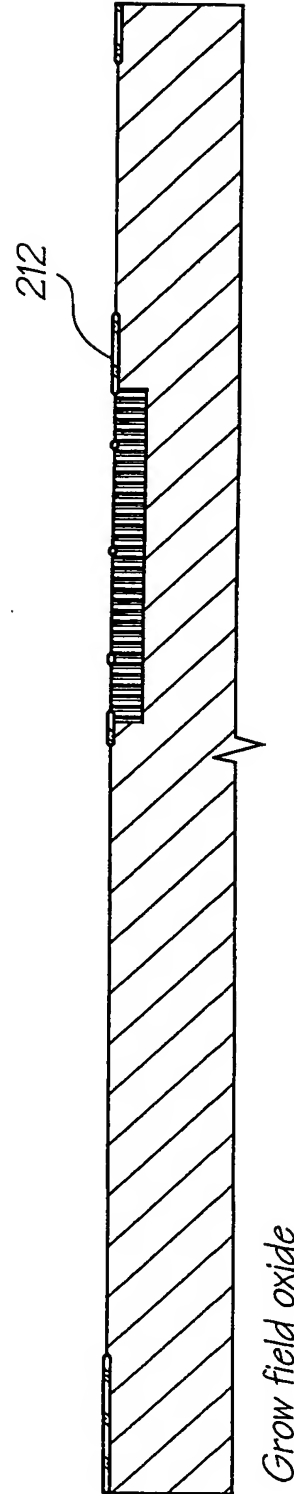


FIG. 21



Active mask

FIG. 22



Grow field oxide

FIG. 23

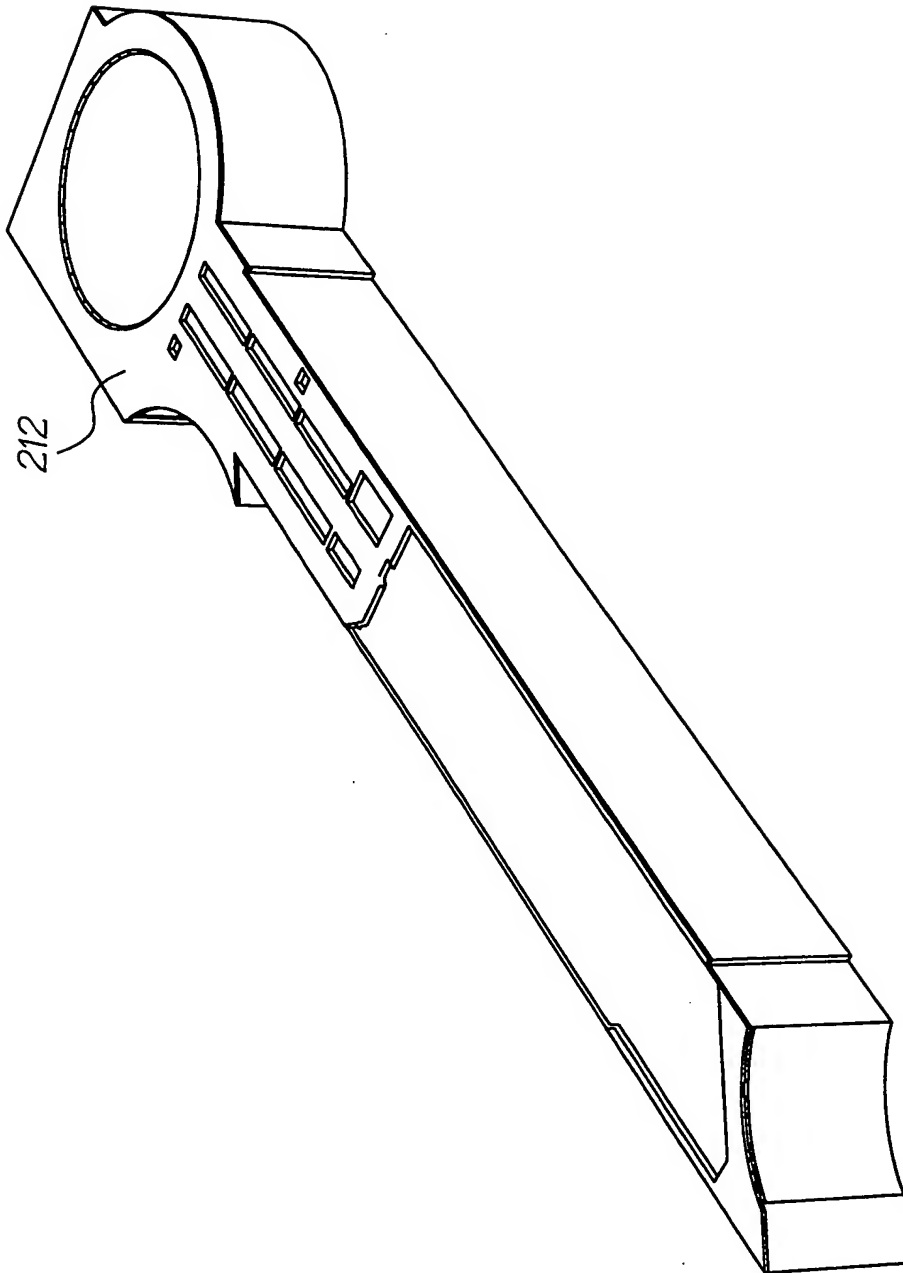
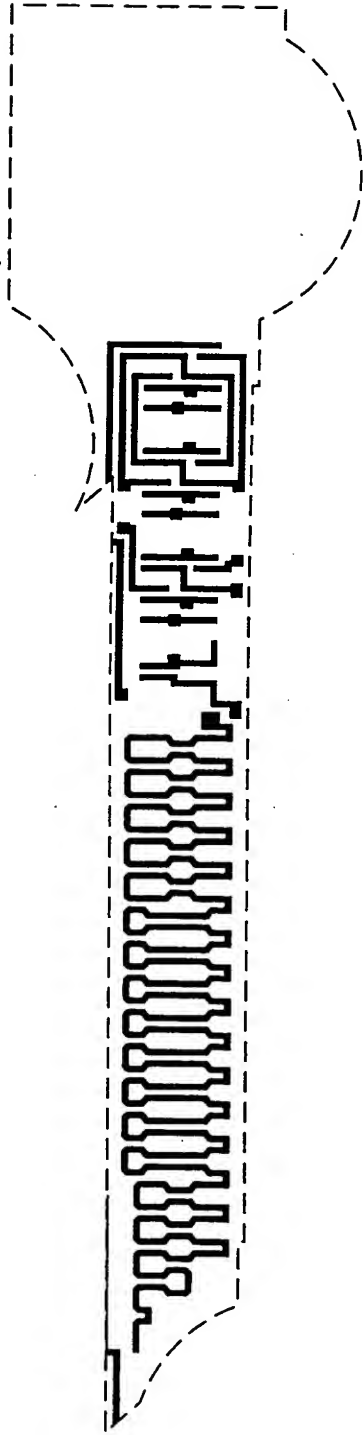
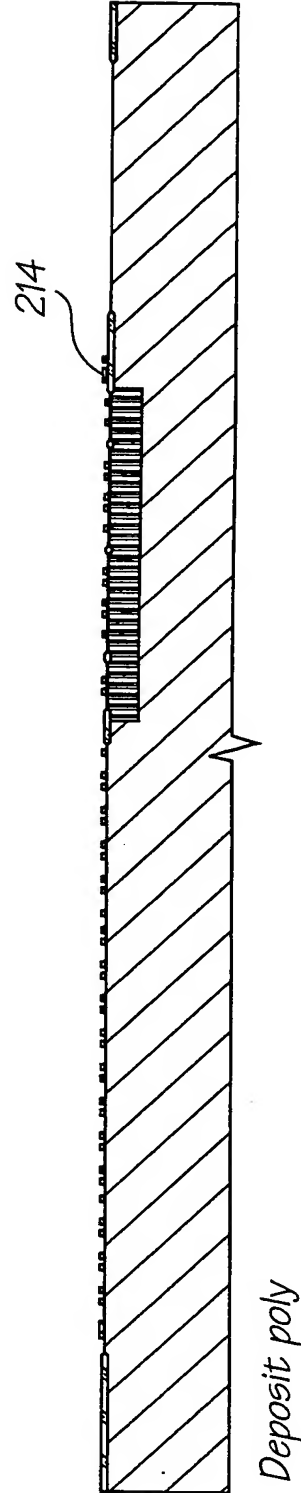


FIG. 24



Poly mask

FIG. 25



Deposit poly

FIG. 26

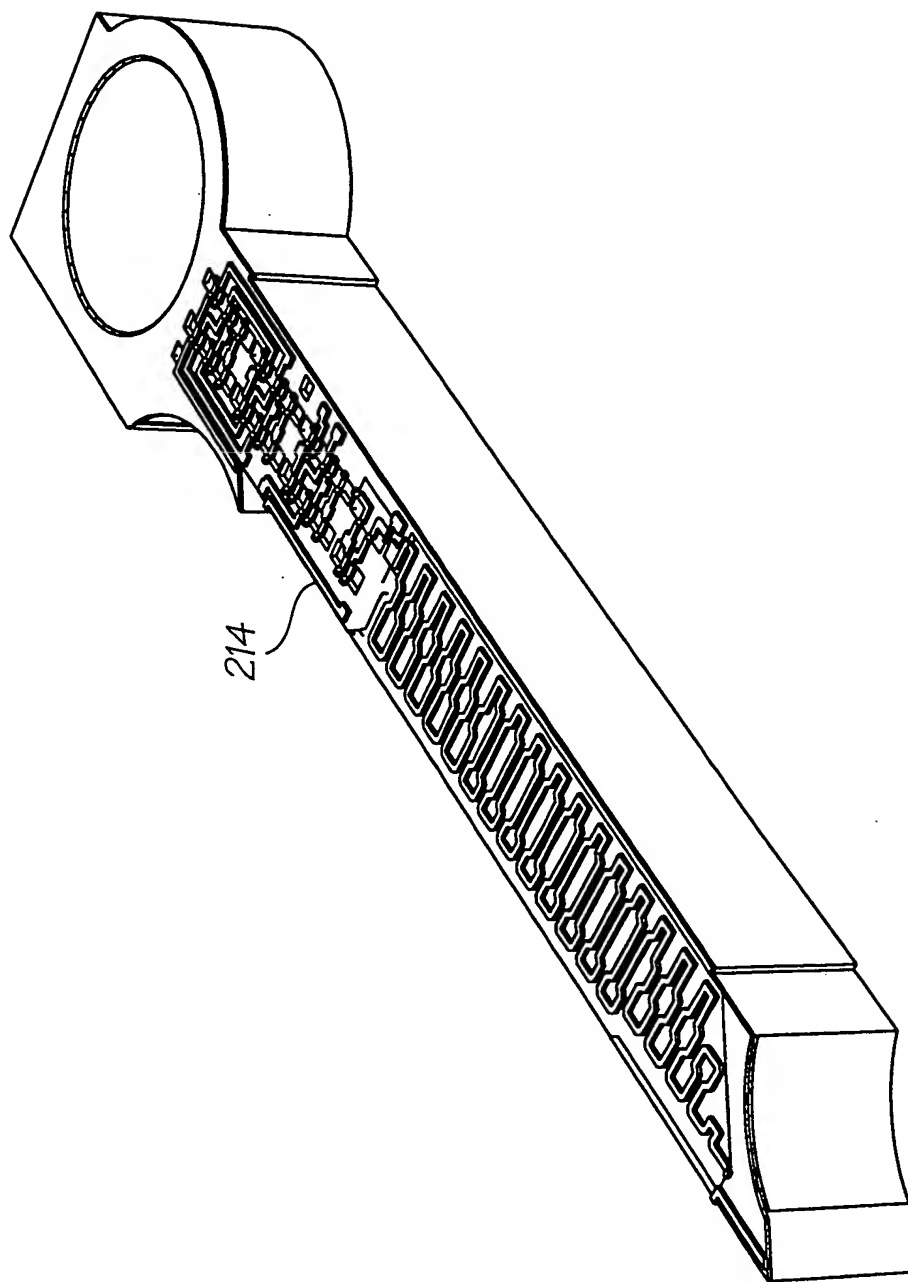
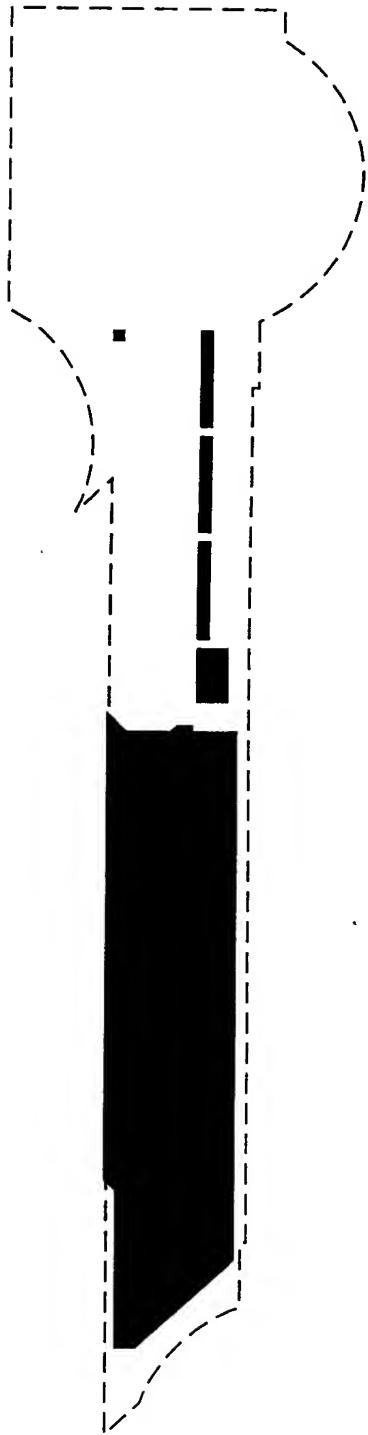
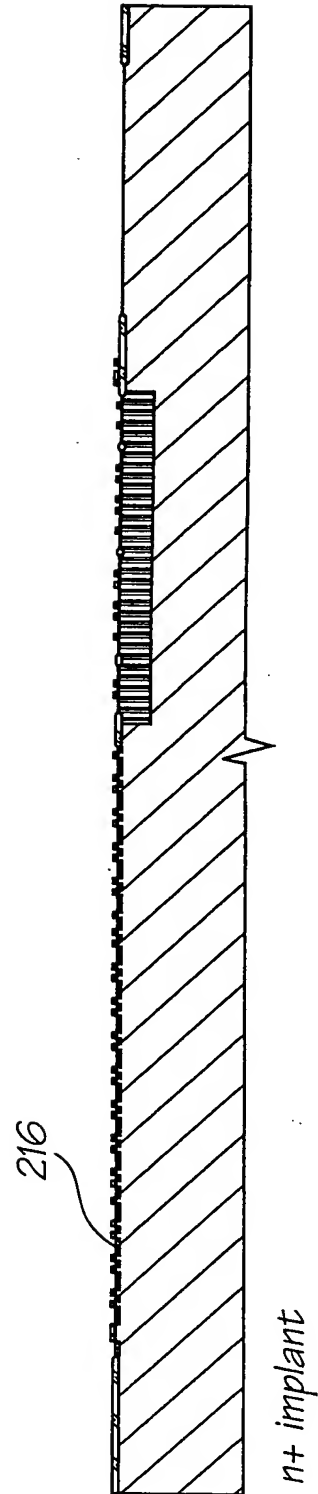


FIG. 27



n+ mask

FIG. 28



n+ implant

FIG. 29

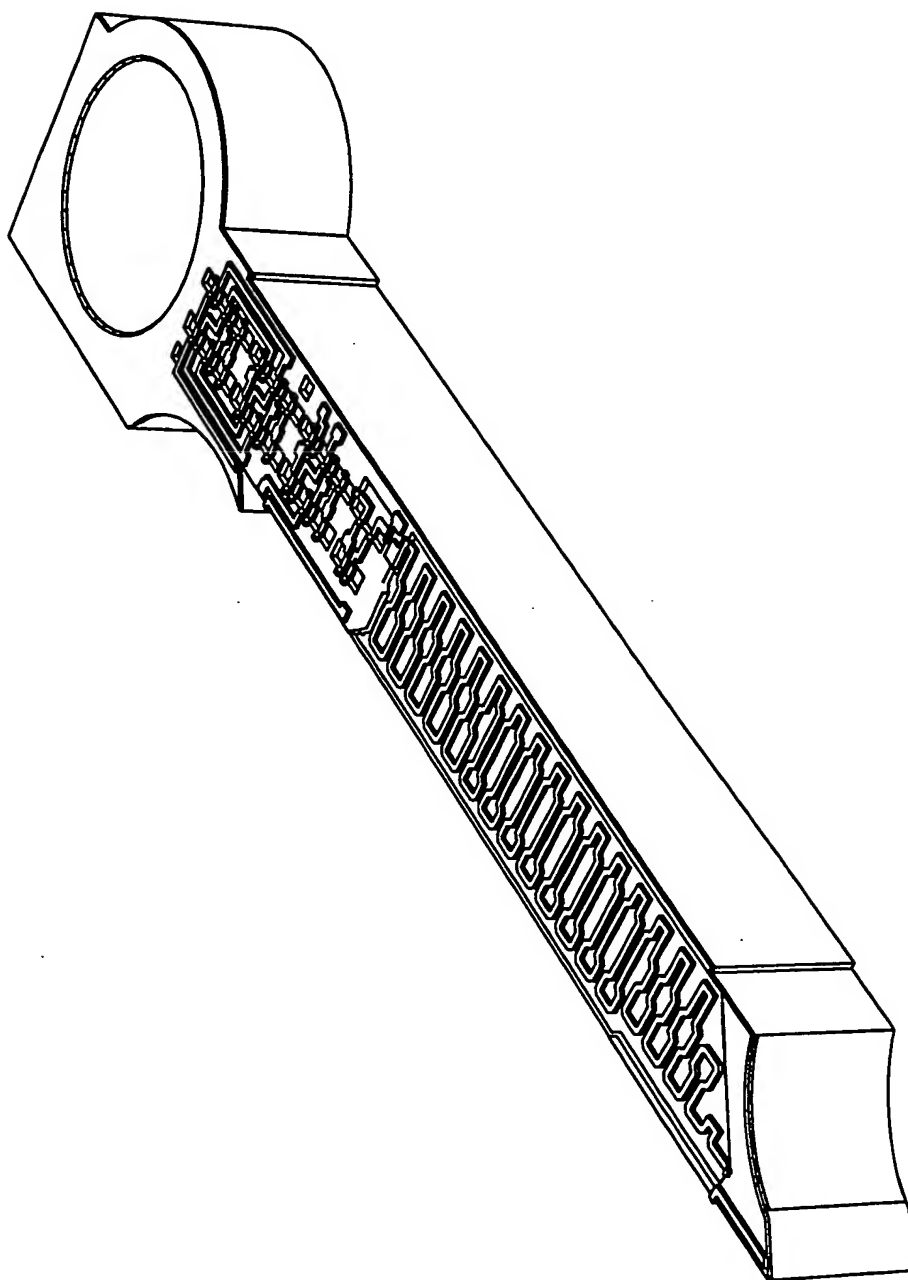
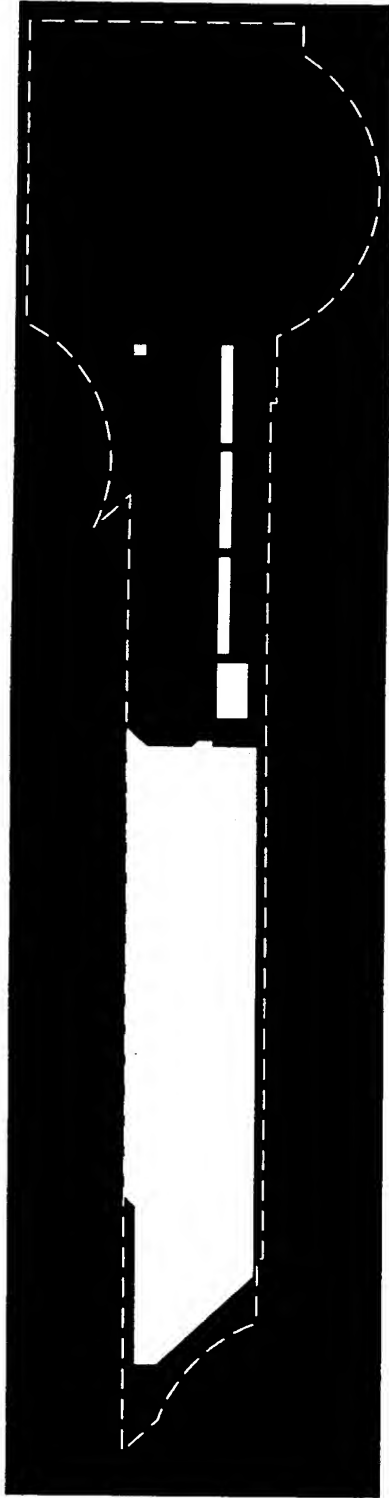
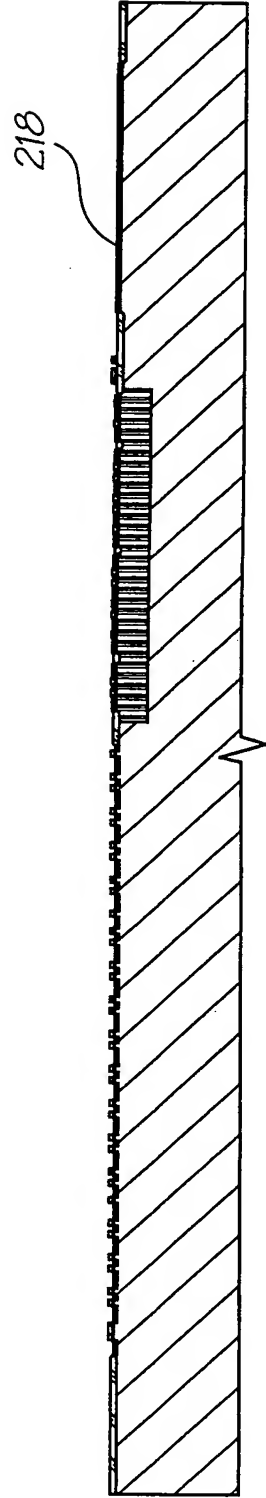


FIG. 30



p+ mask

FIG. 31



p+ implant

FIG. 32

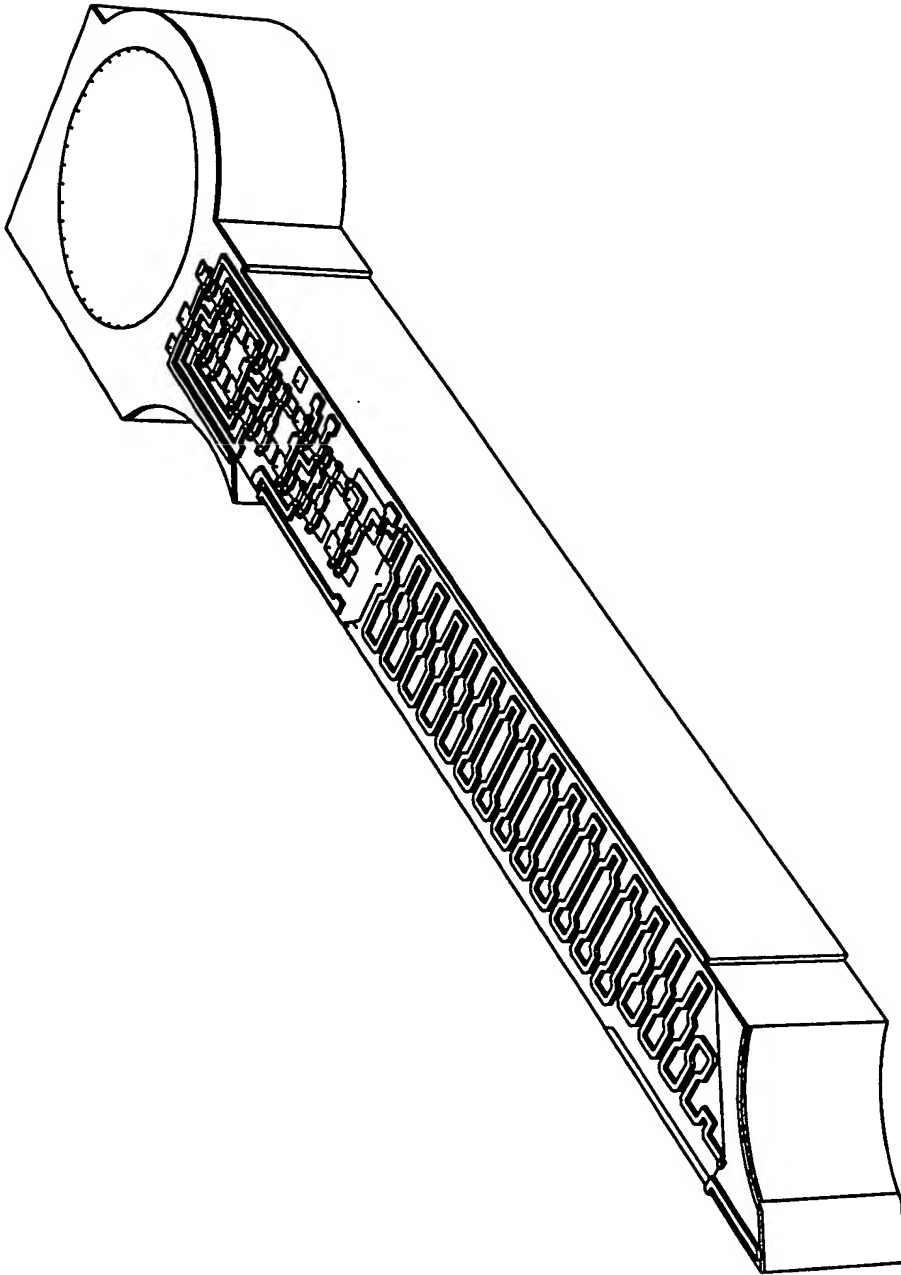
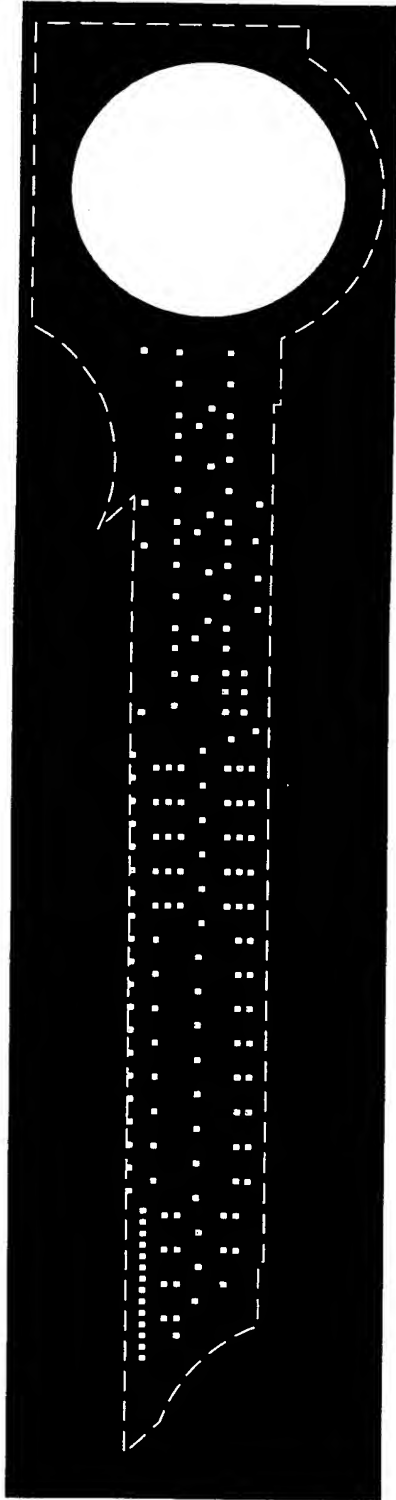
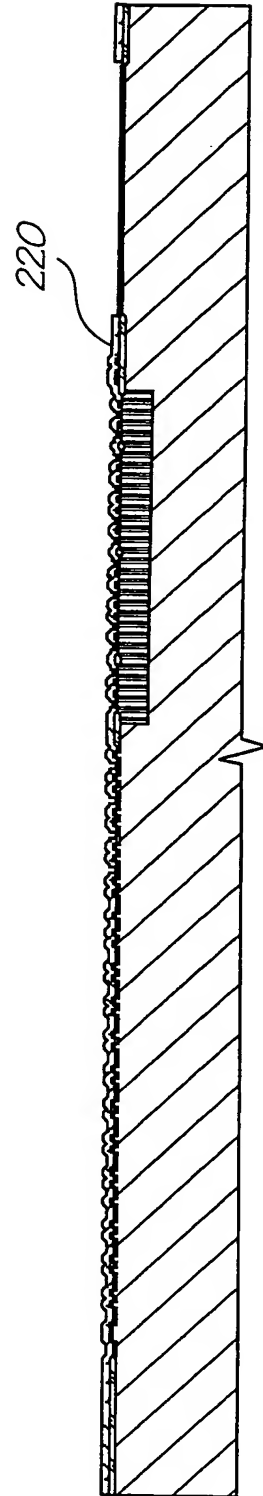


FIG. 33



Contacts mask

FIG. 34



Deposit ILD 1, etch contacts

FIG. 35

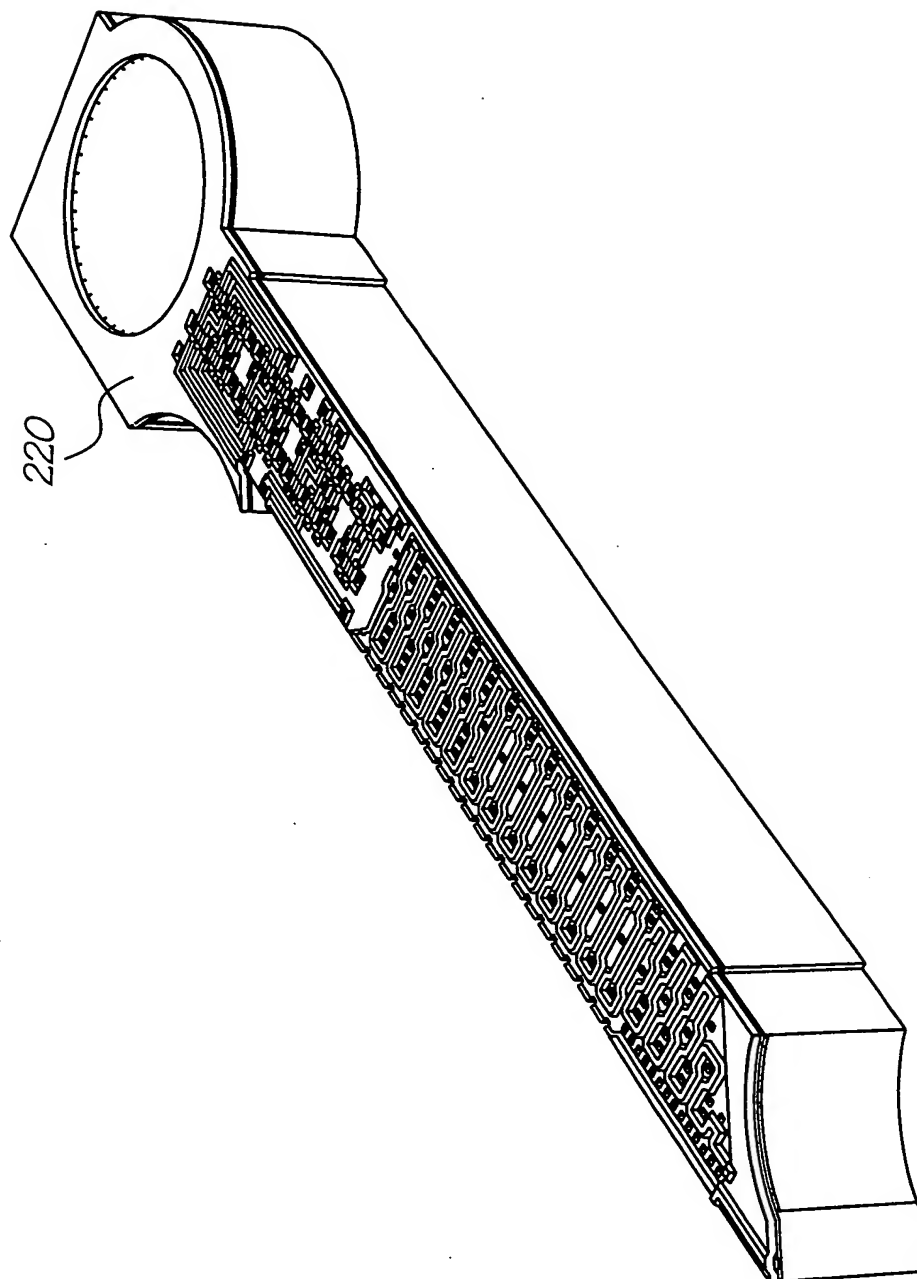
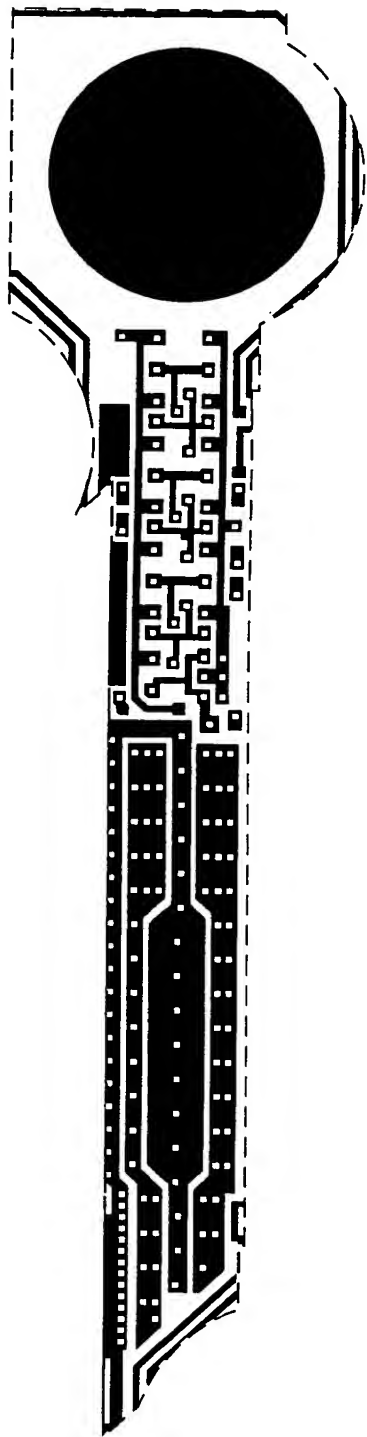
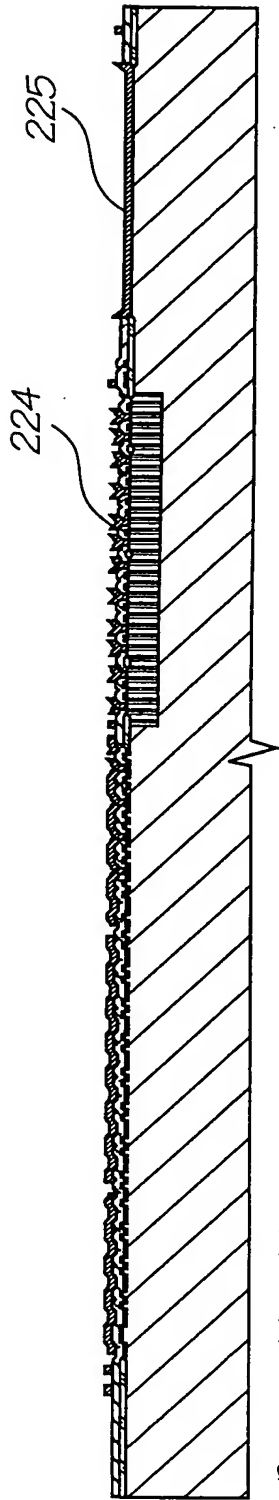


FIG. 36



Metal 1 mask

FIG. 37



Deposit Metal 1

FIG. 38

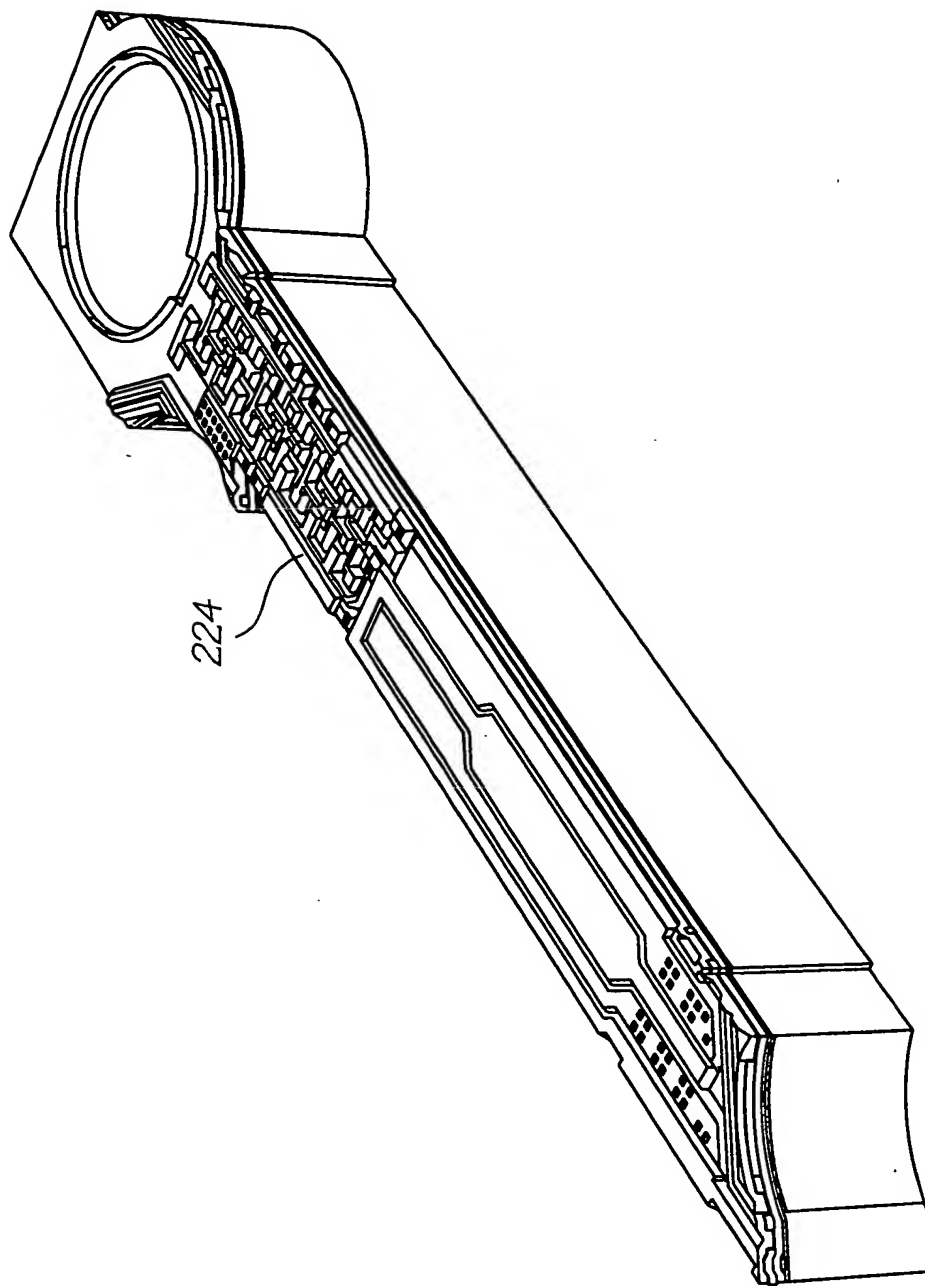
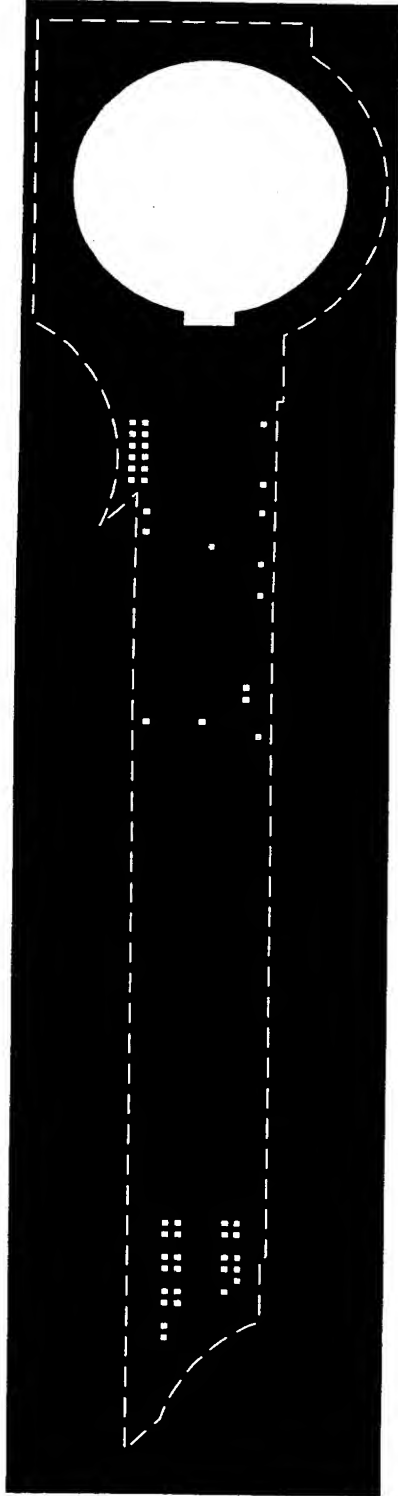
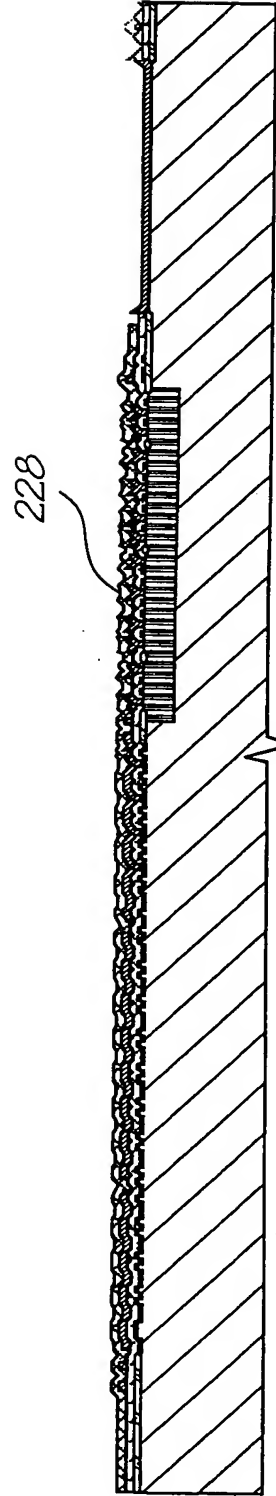


FIG. 39



Via 1 mask

FIG. 40



Deposit ILD 2, etch vias

FIG. 41

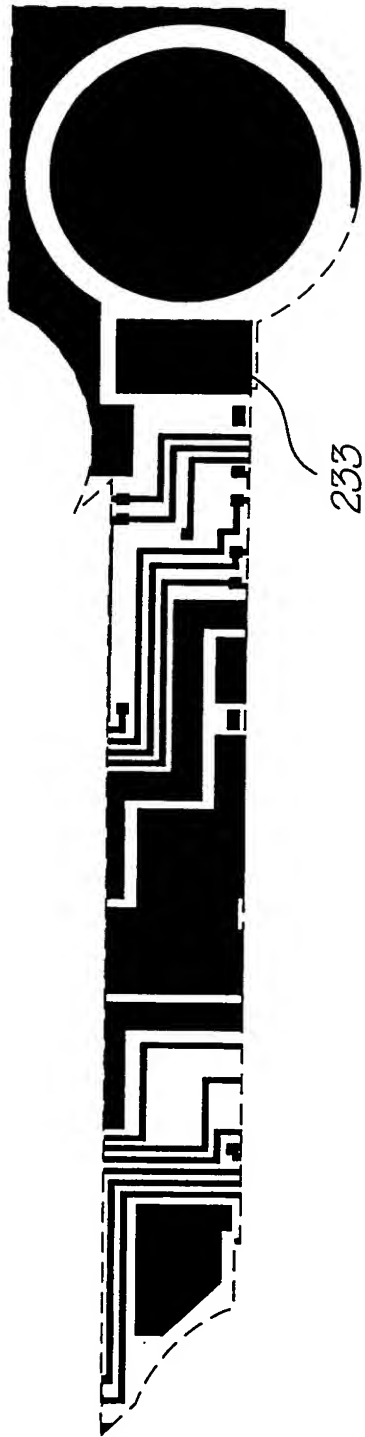


FIG. 42

Metal 2 mask

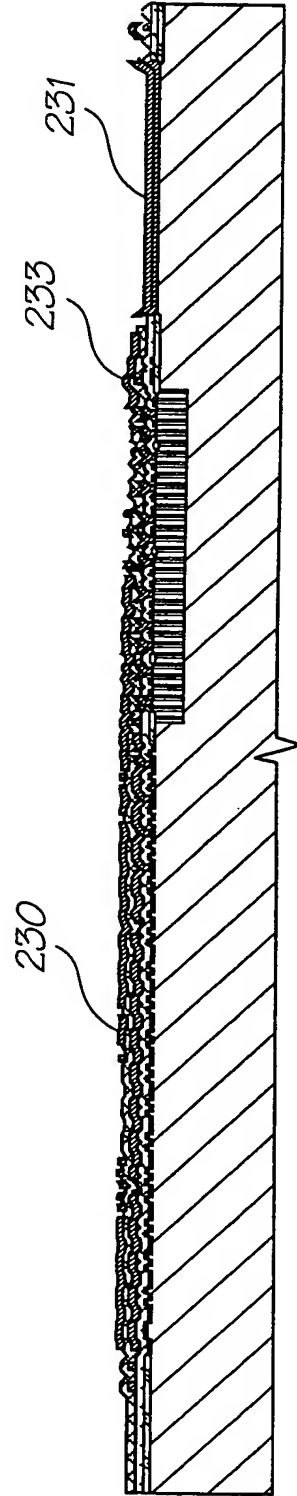


FIG. 43

Deposit metal 2

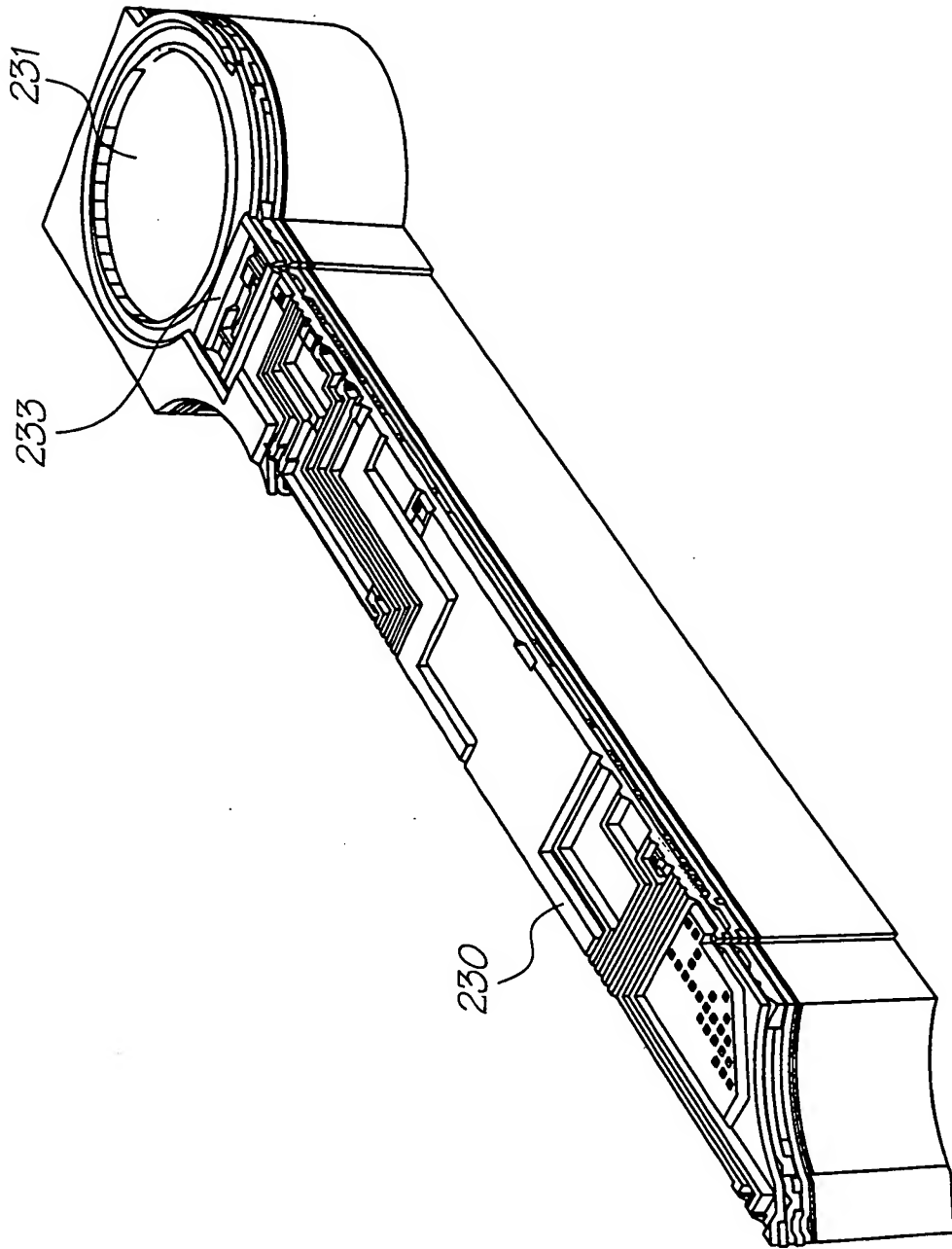
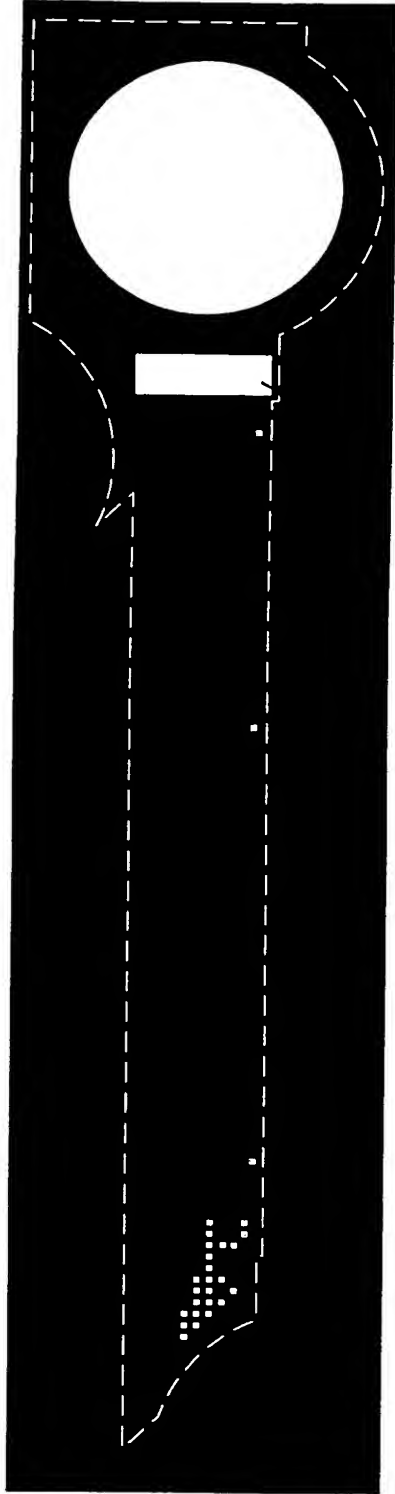
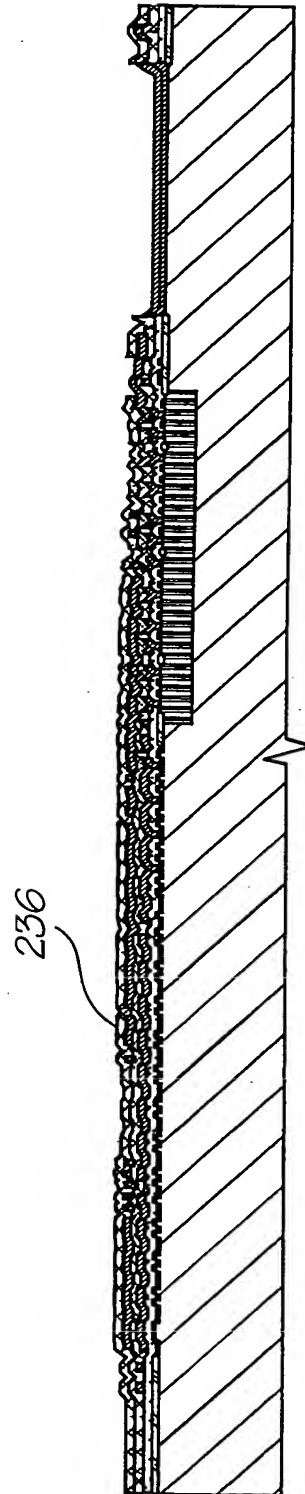


FIG. 44



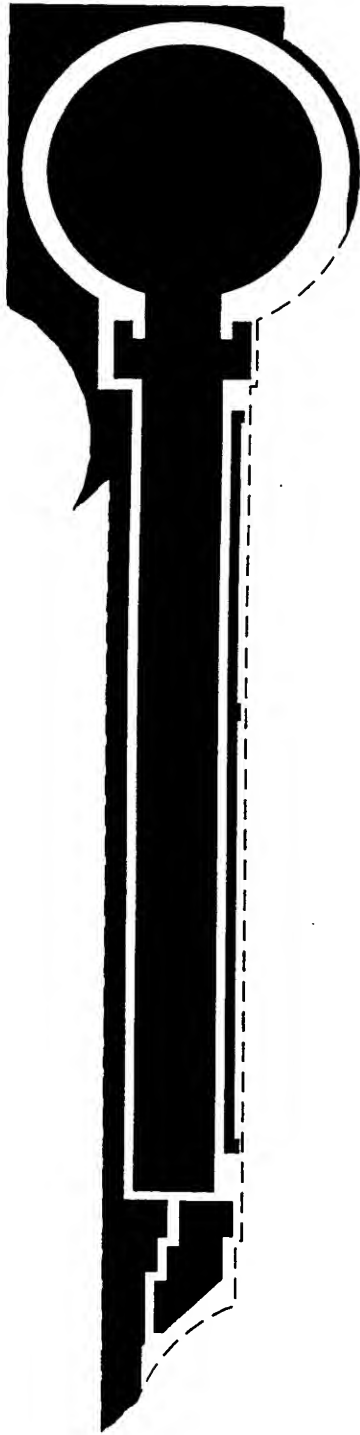
Via 2 mask

FIG. 45



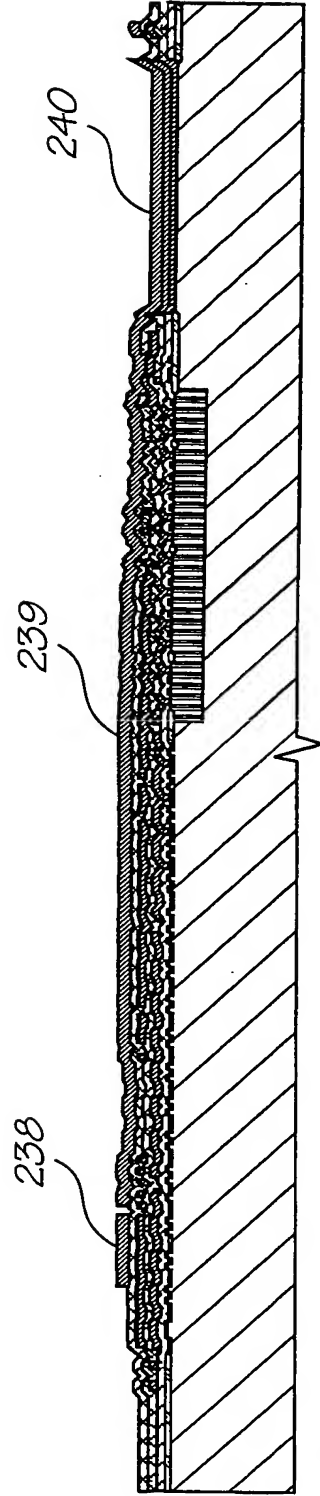
Deposit ILD 3, etch vias

FIG. 46



Metal 3 mask

FIG. 47



Deposit metal 3

FIG. 48

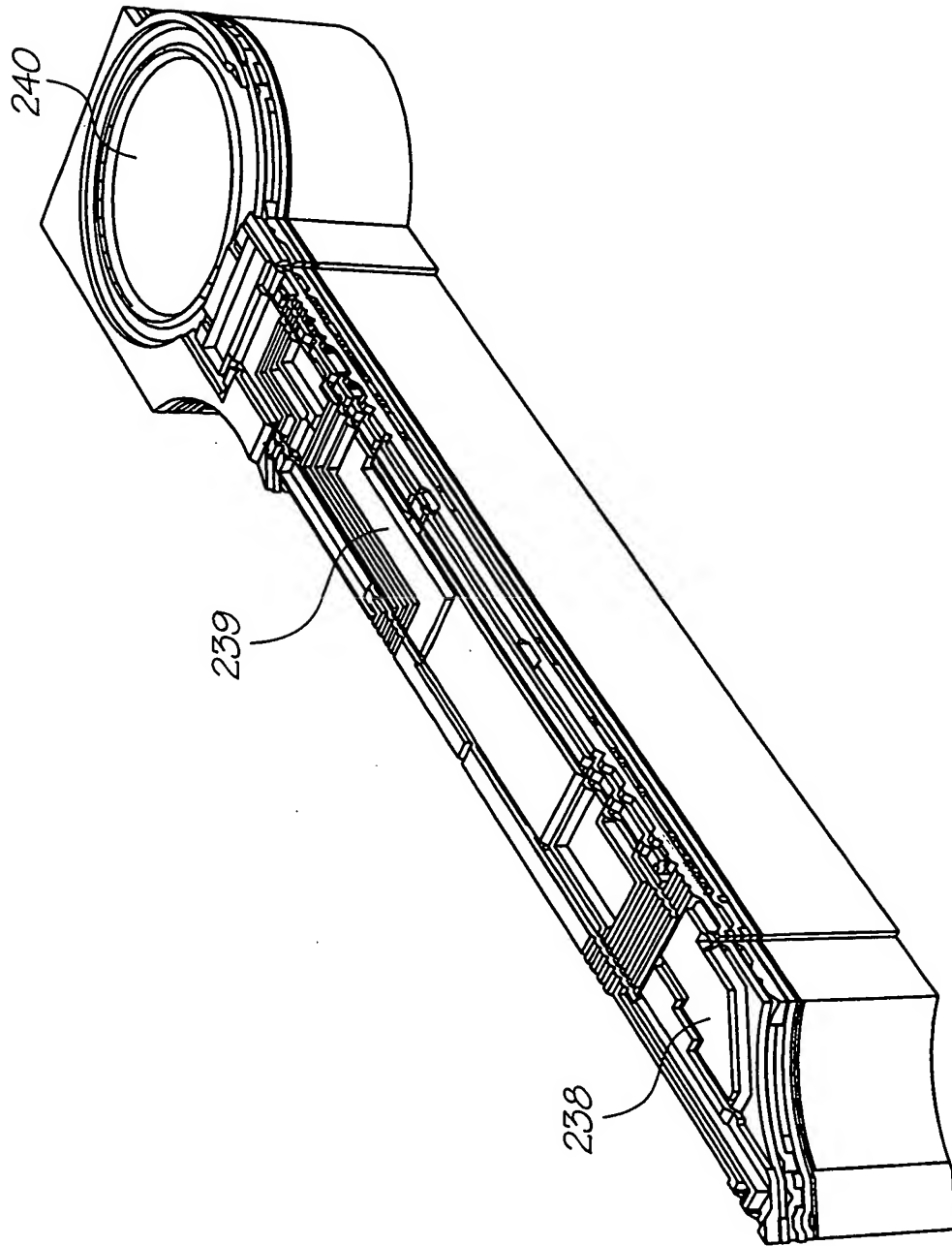
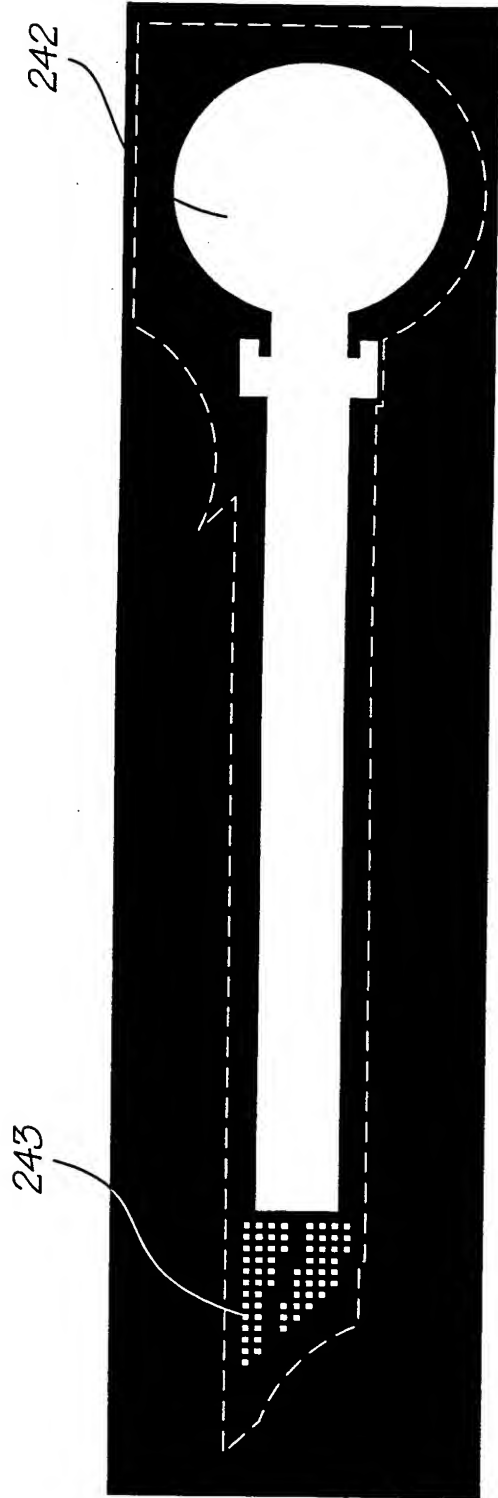
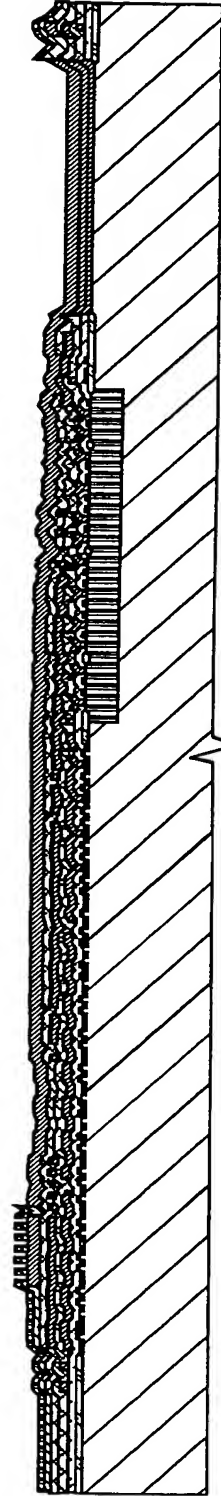


FIG. 49



Via 3 / Passivation mask

FIG. 50



Deposit passivation oxide & nitride, etch vias

FIG. 51

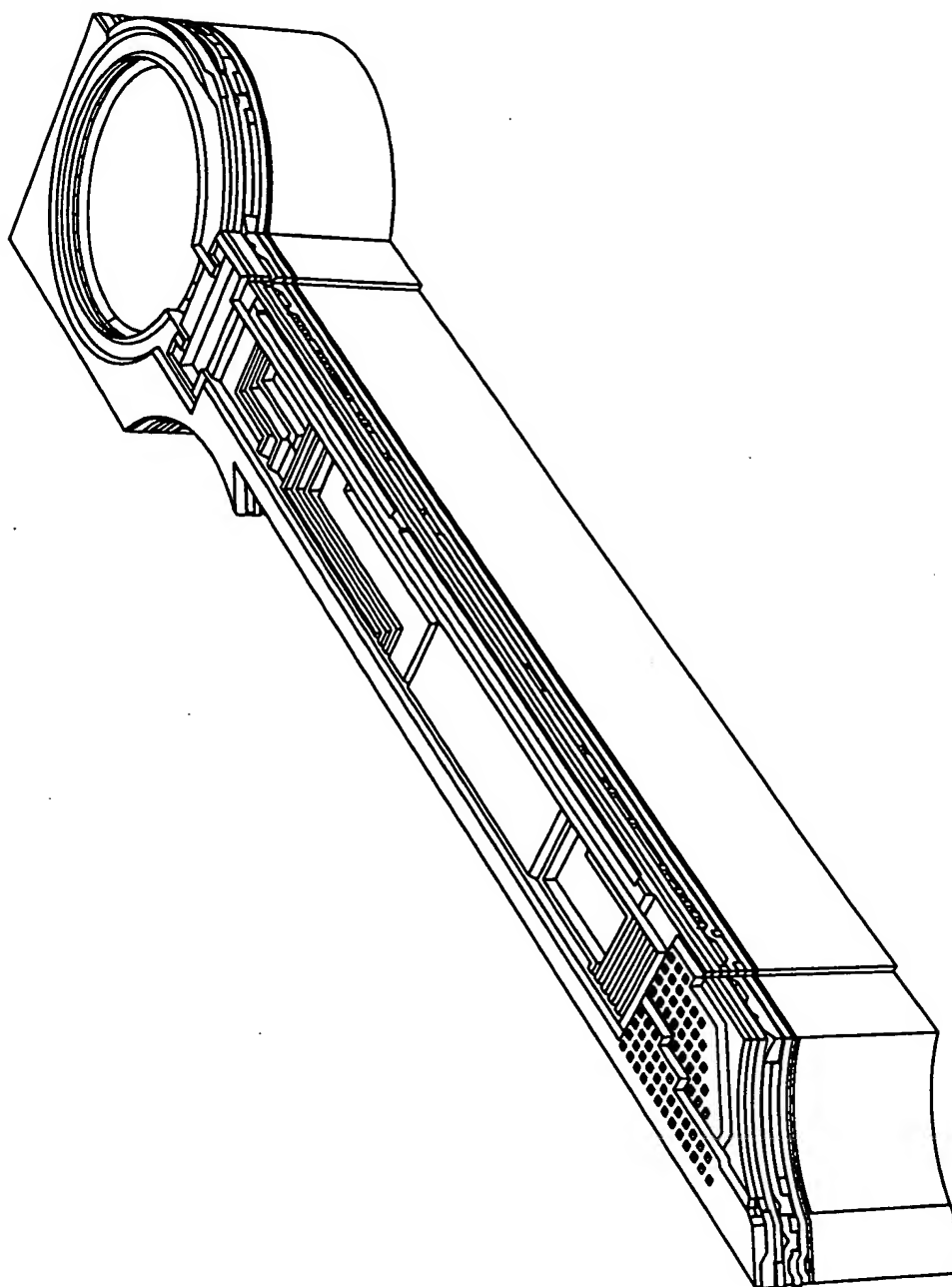
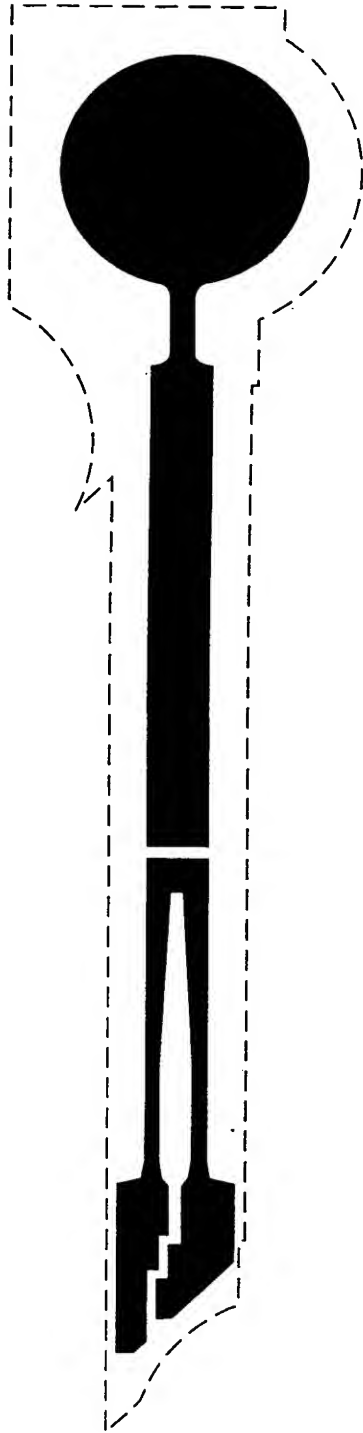
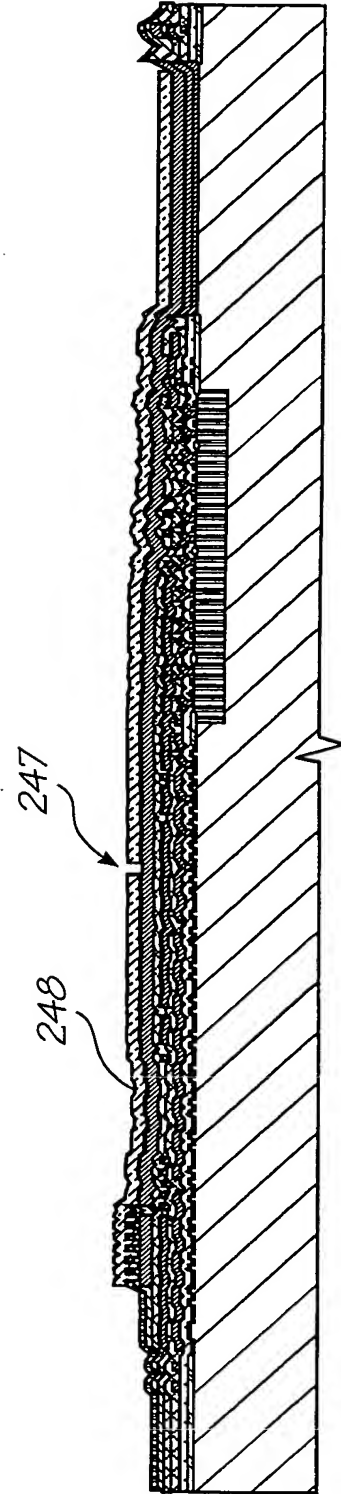


FIG. 52



Heater mask

FIG. 53



Deposit heater TiN

FIG. 54

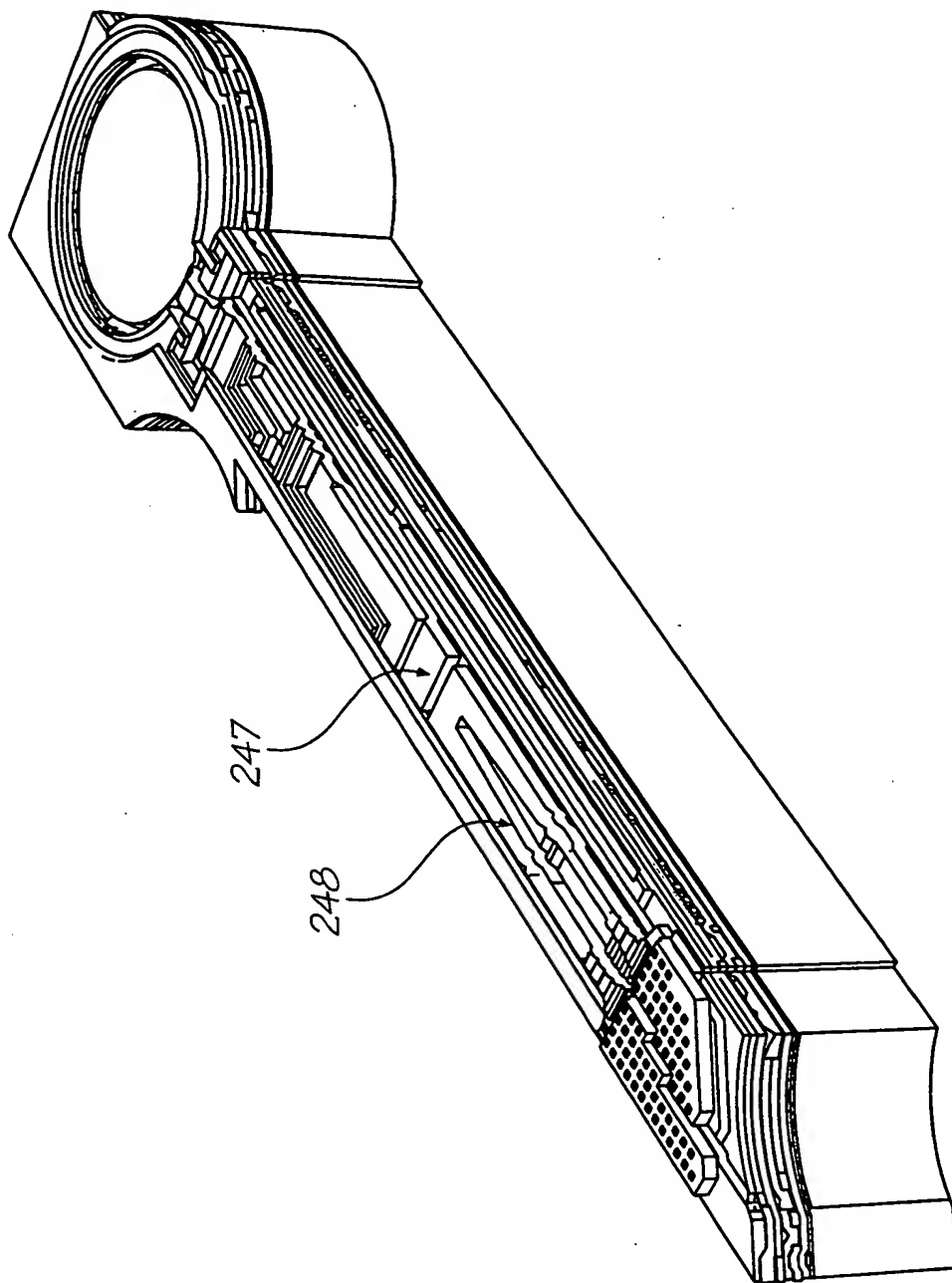
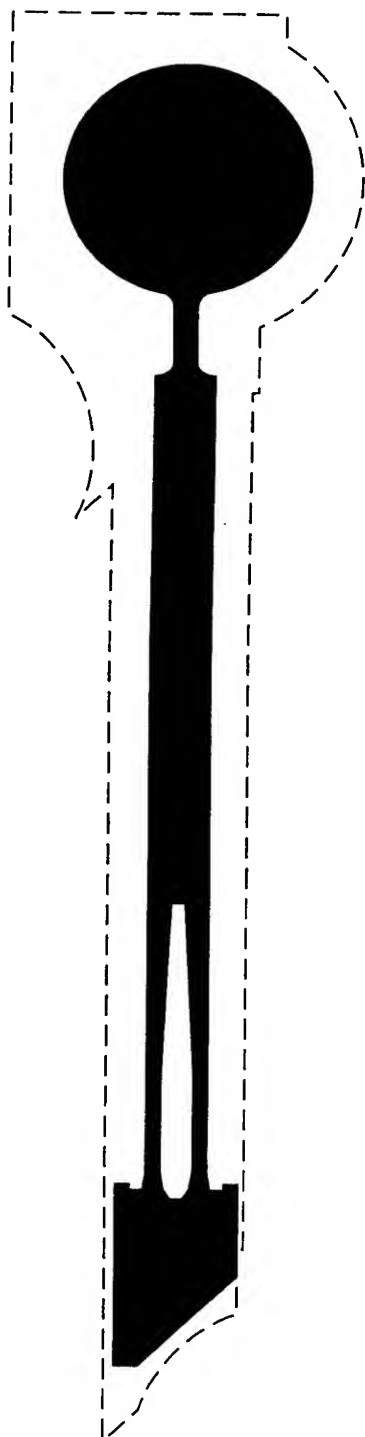
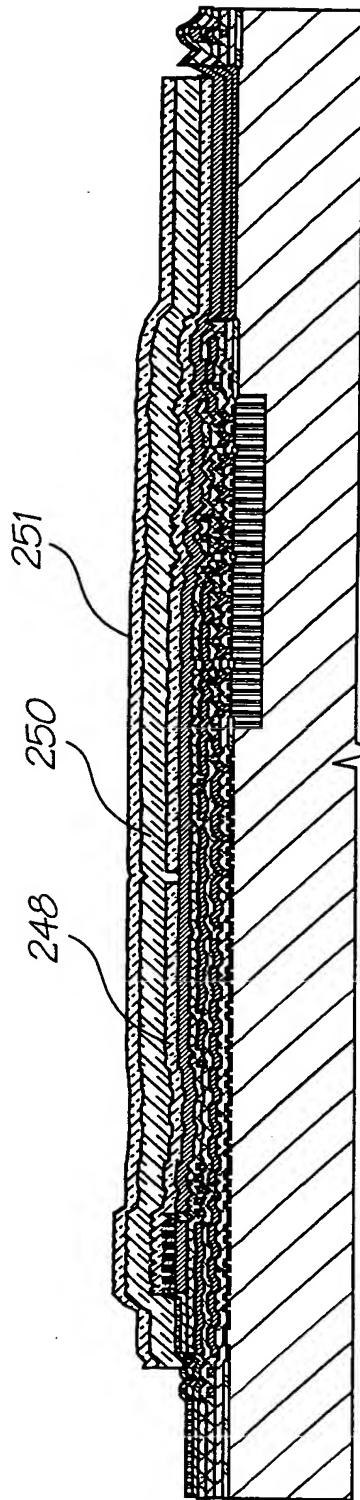


FIG. 55



Actuator / bend compensator mask

FIG. 56



Deposit actuator glass and bend compensator TiN, etch together

FIG. 57

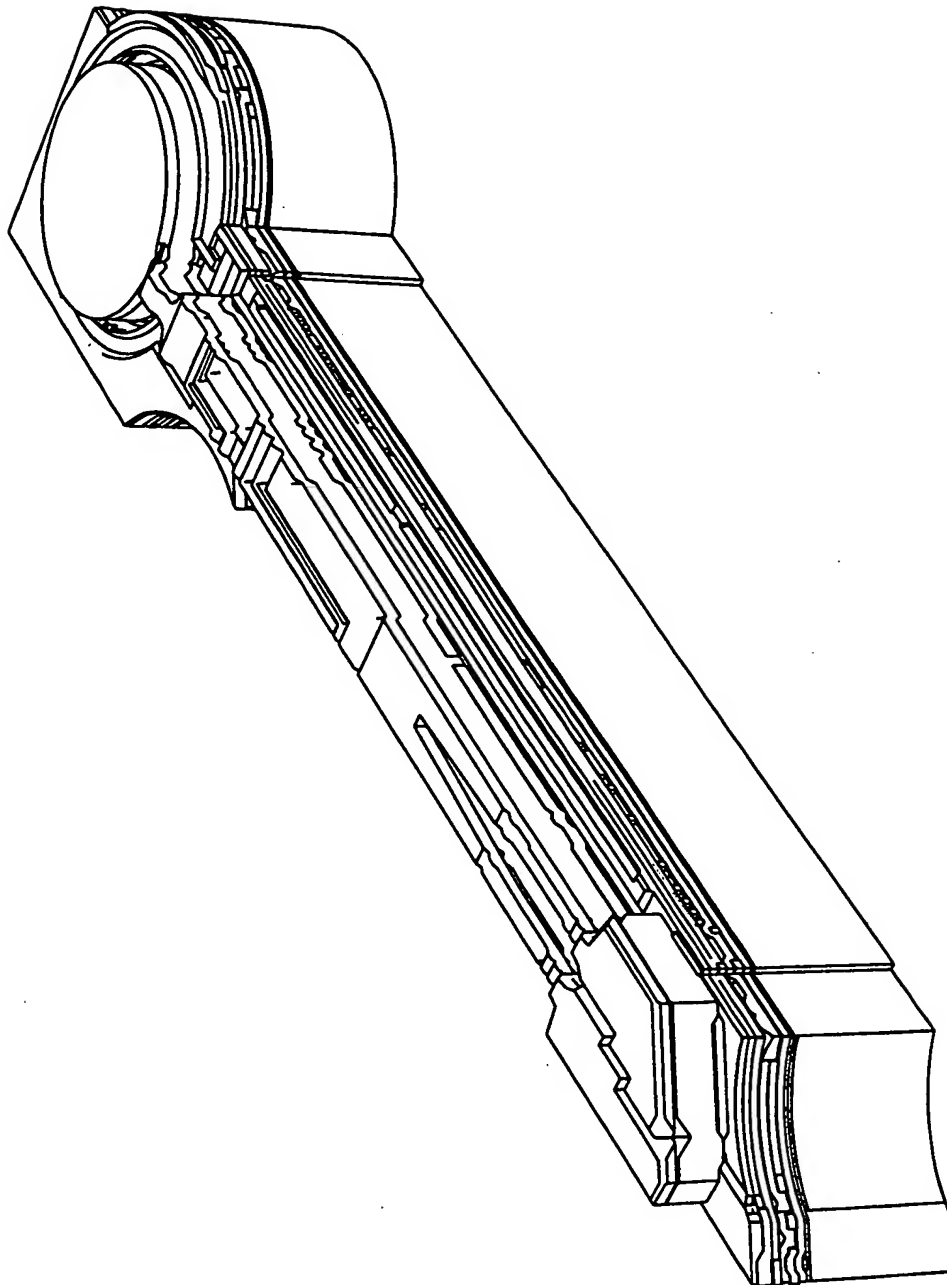
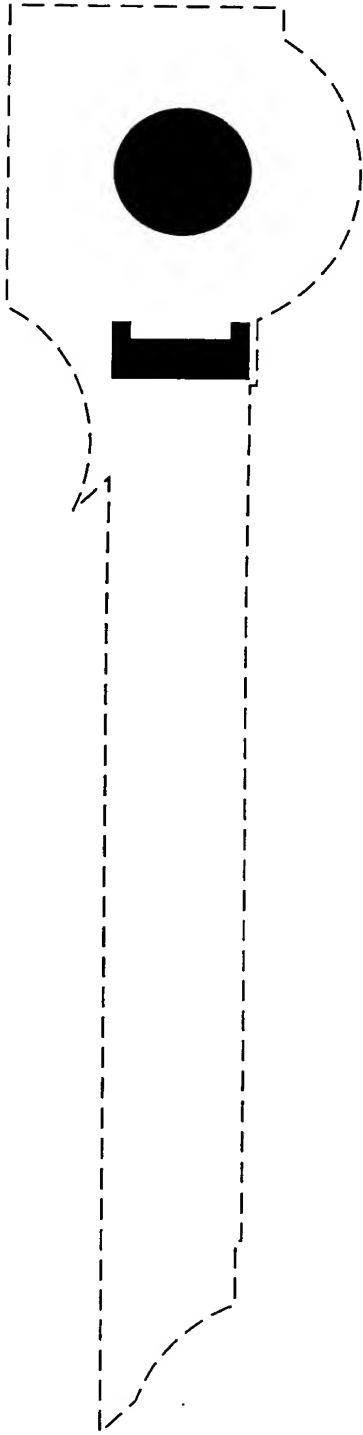
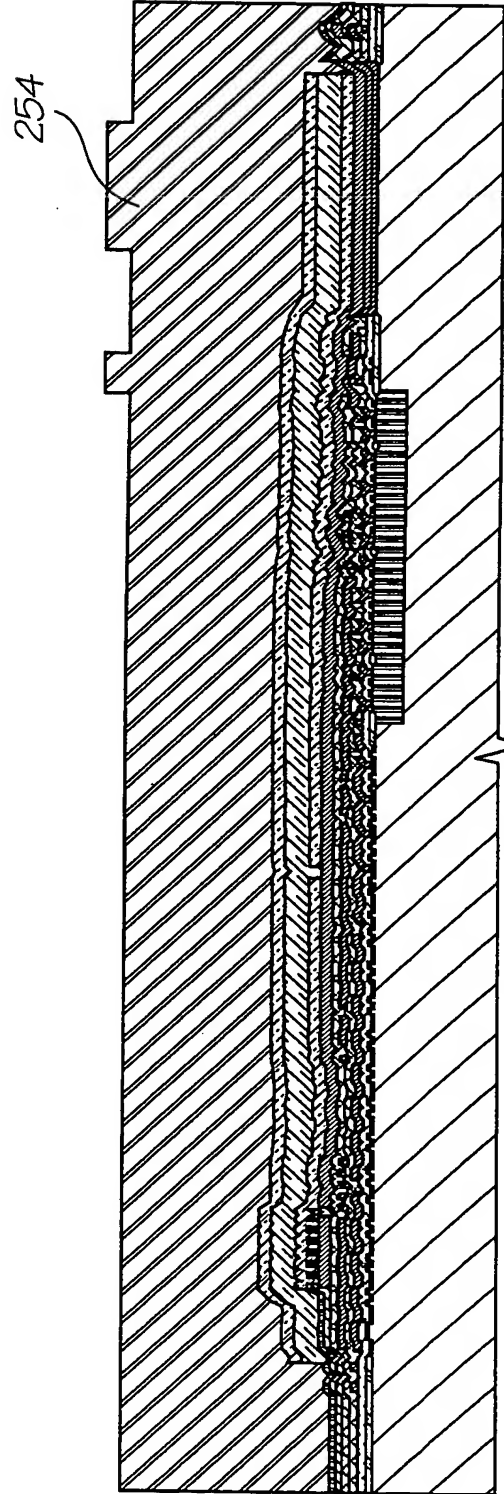


FIG. 58



Nozzle mask

FIG. 59



Deposit sacrificial layer, etch nozzles

FIG. 60

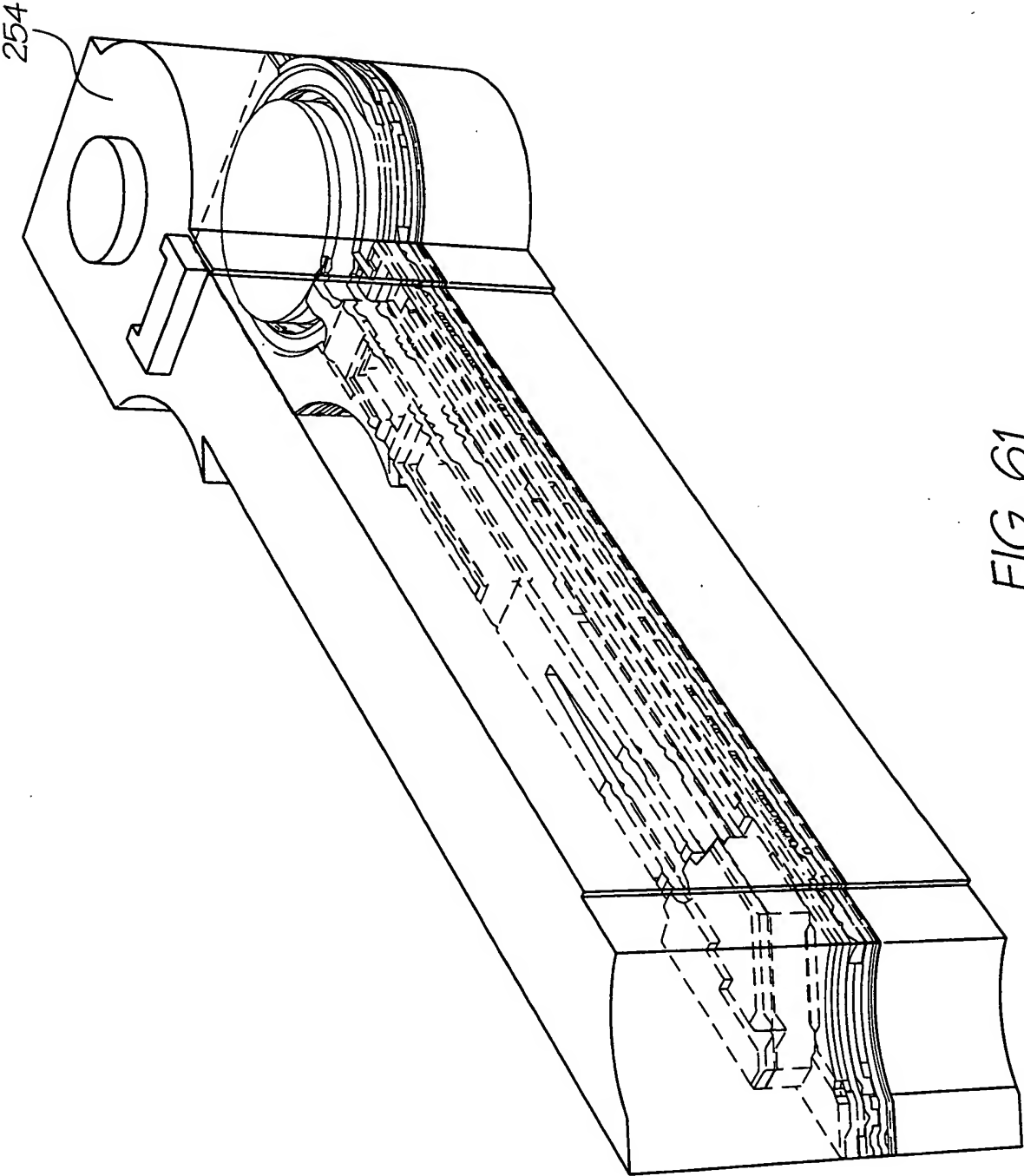
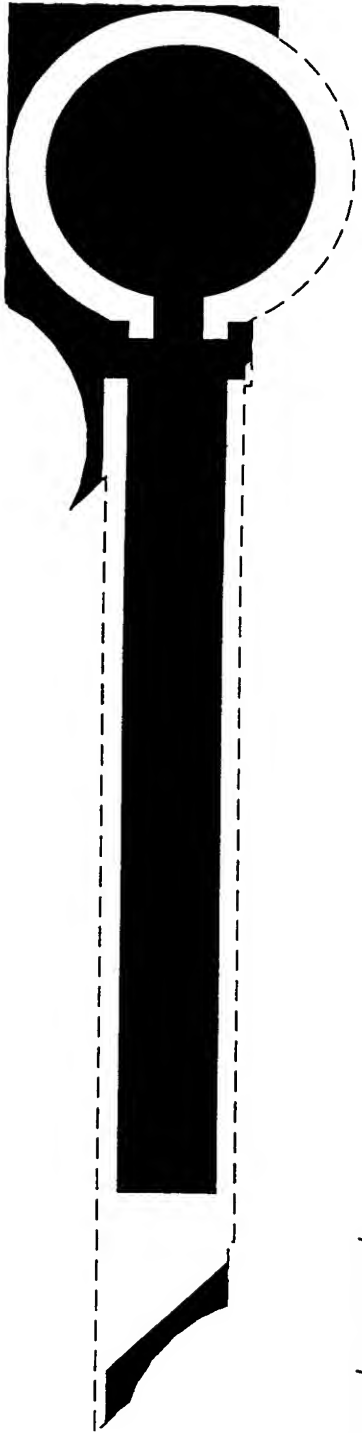


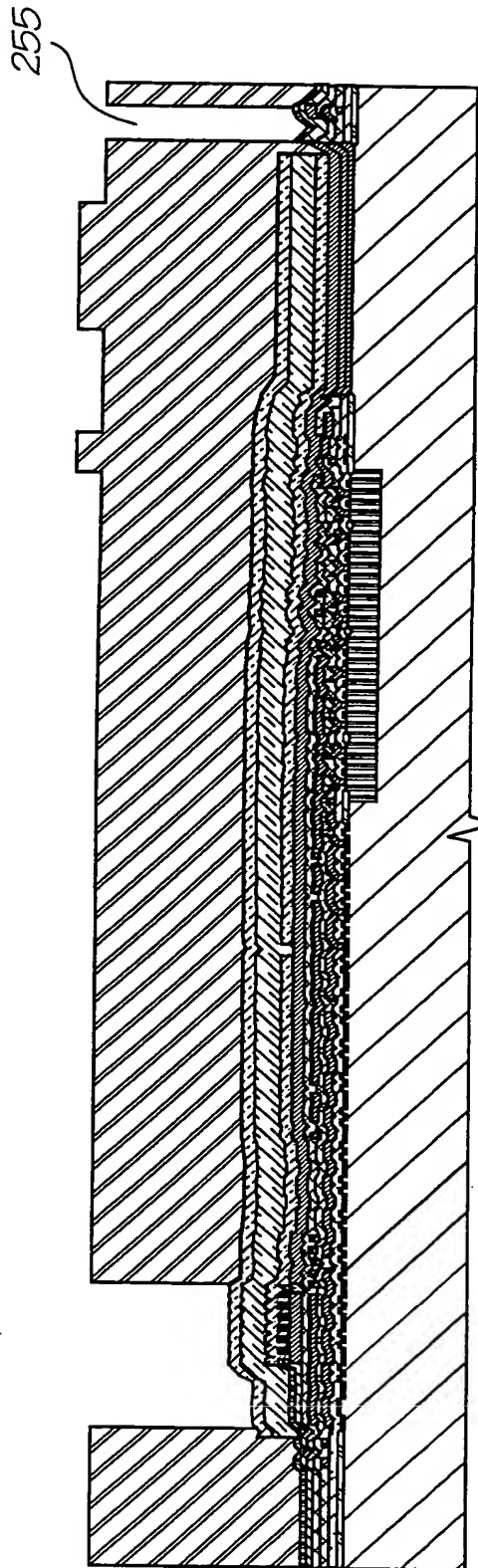
FIG. 61



Chamber mask

FIG. 62

39/81



Etch chambers in sacrificial layer

FIG. 63

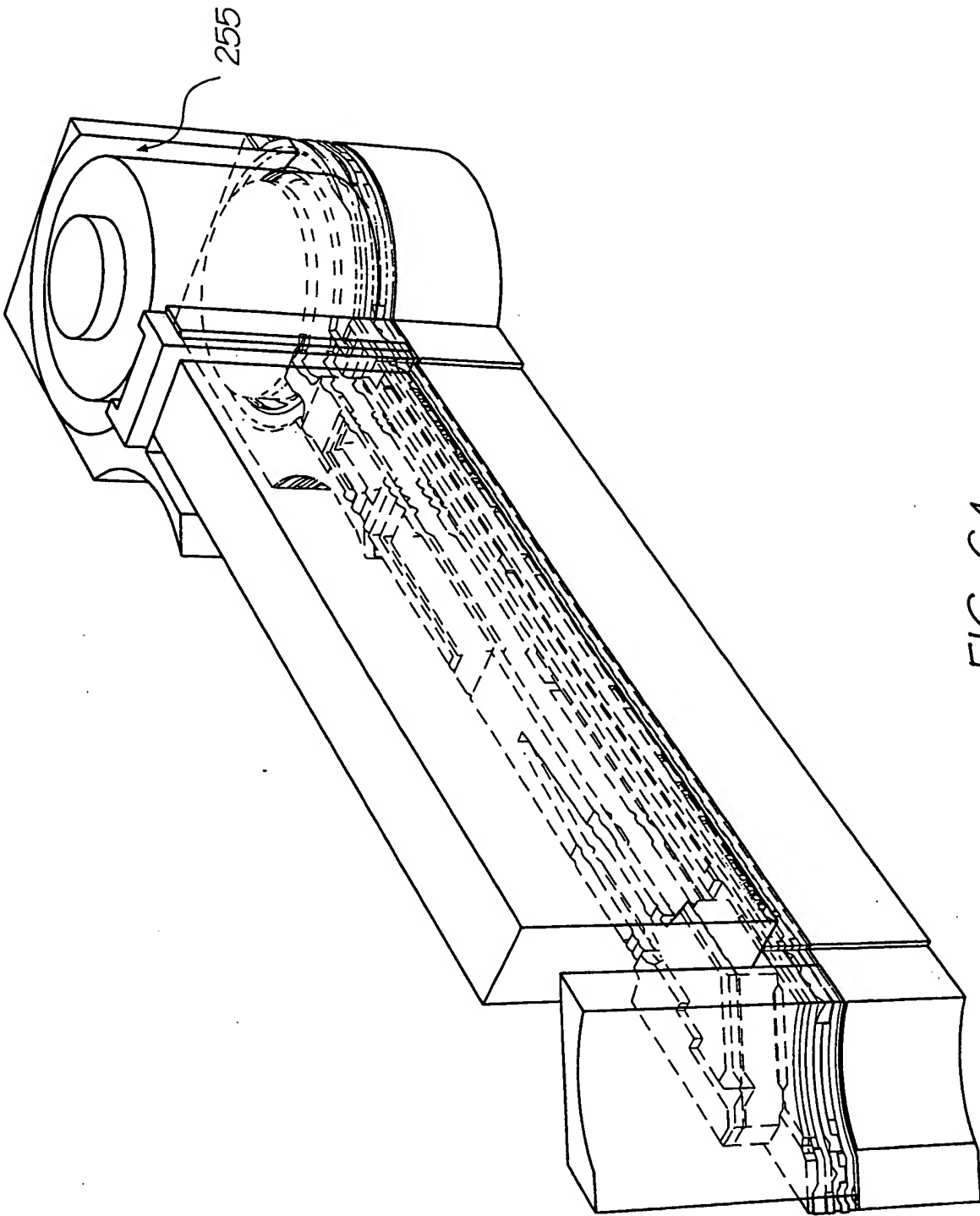


FIG. 64

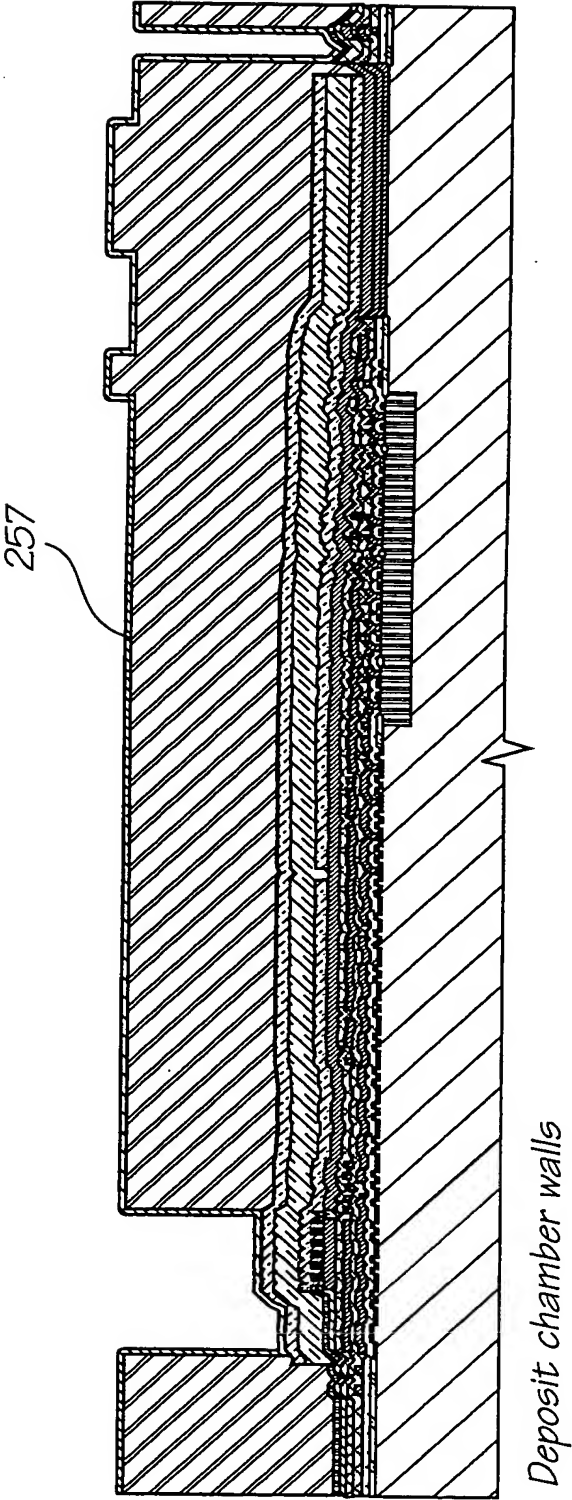


FIG. 65

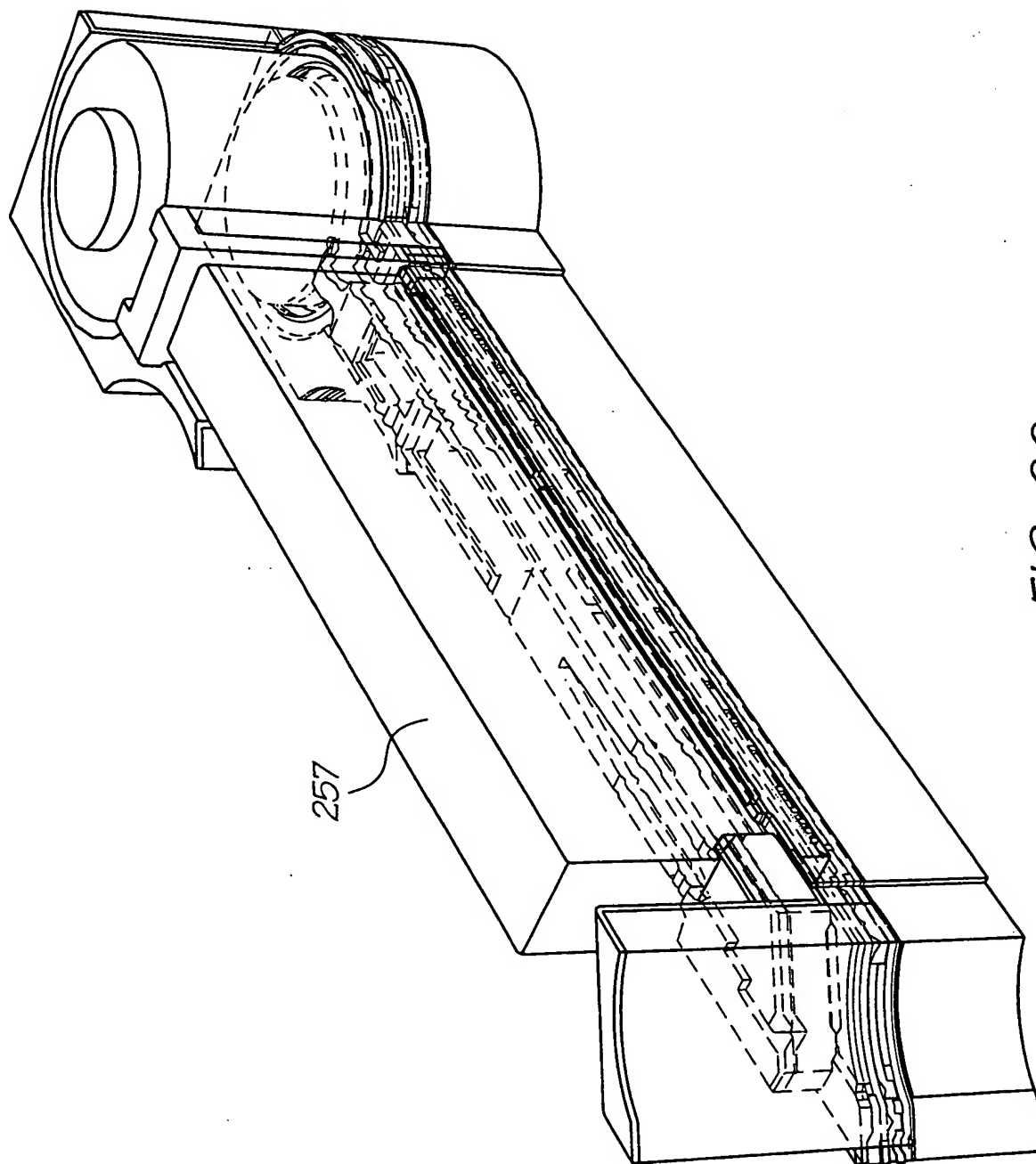


FIG. 66

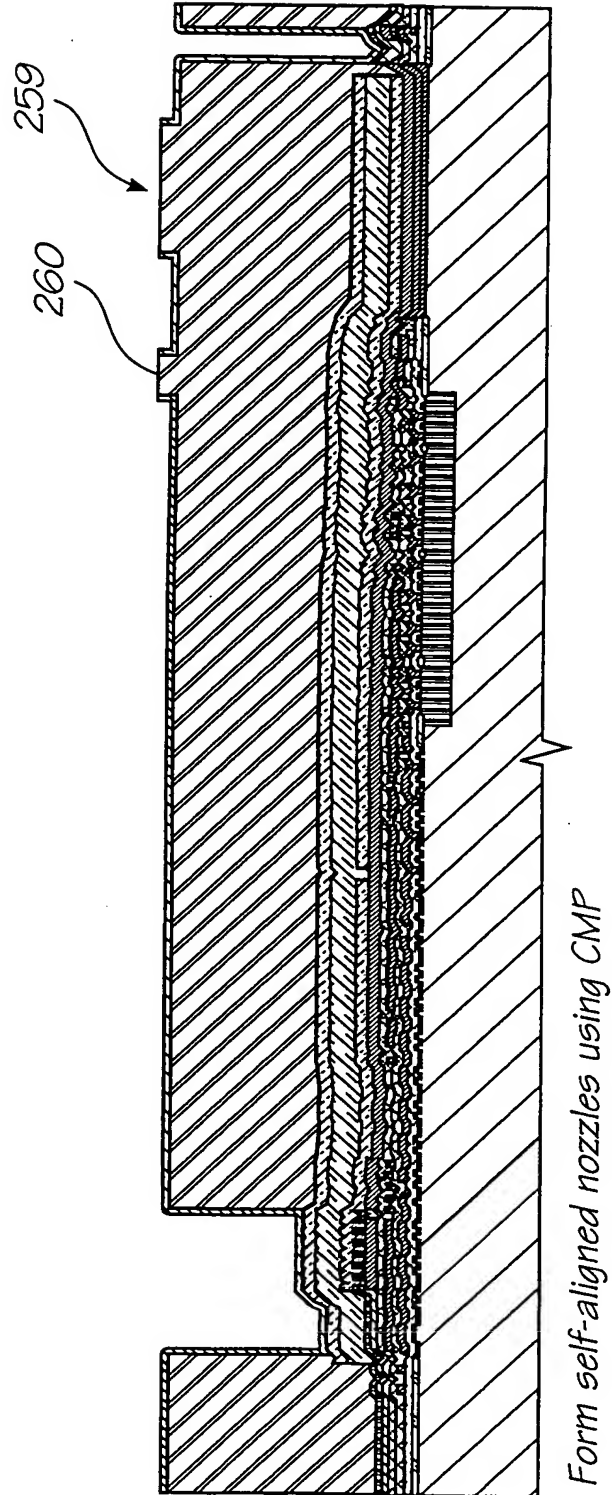


FIG. 67

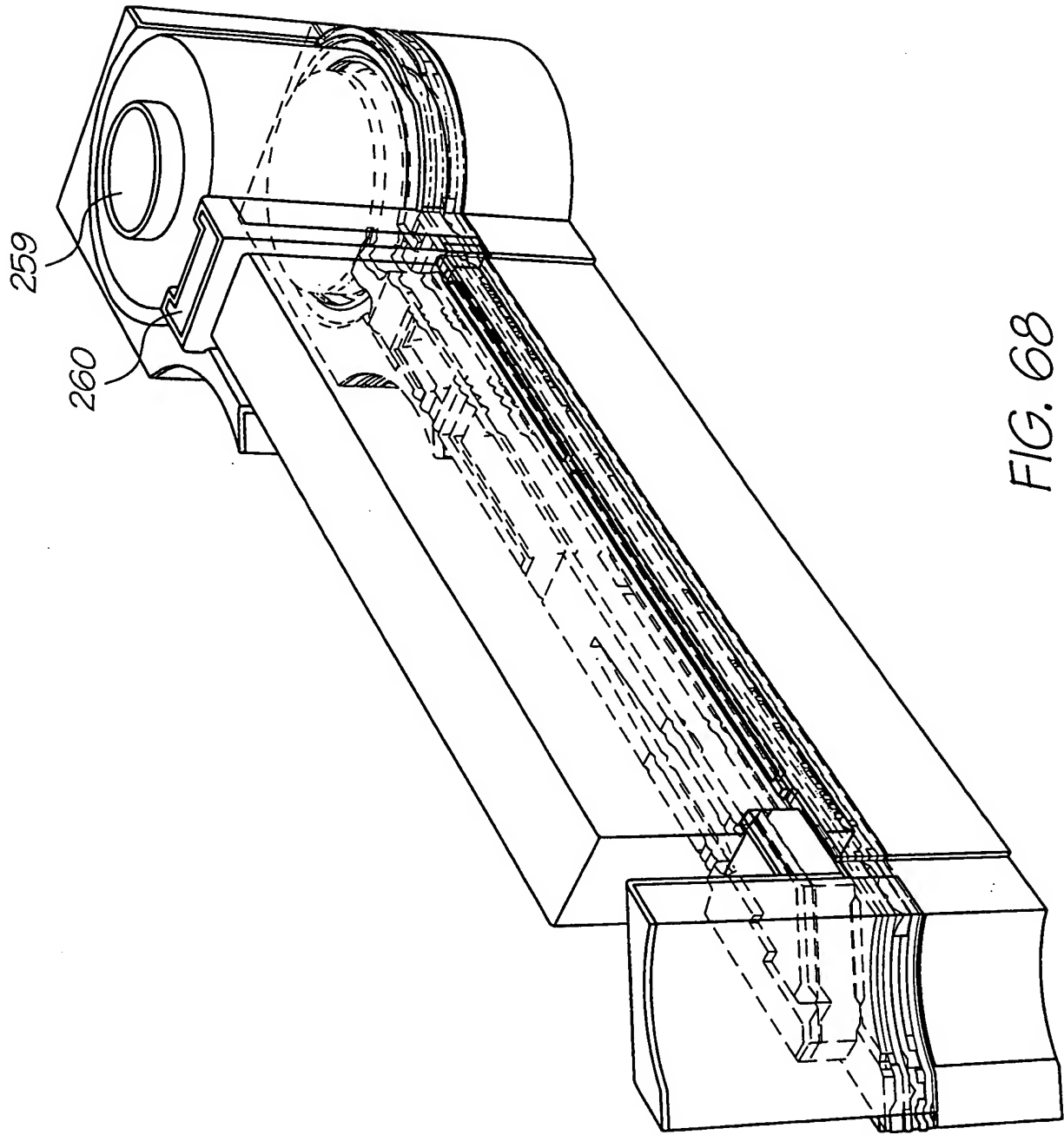
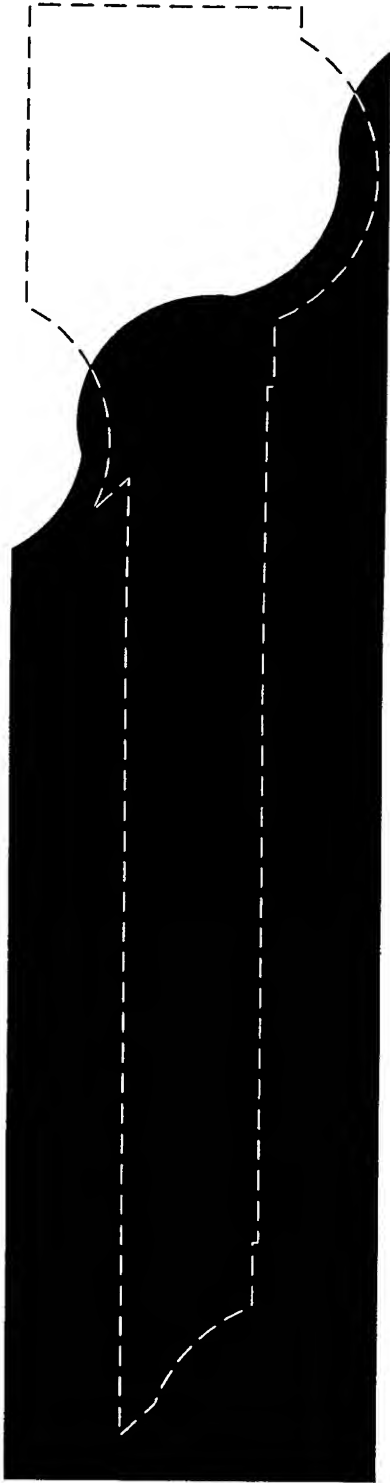
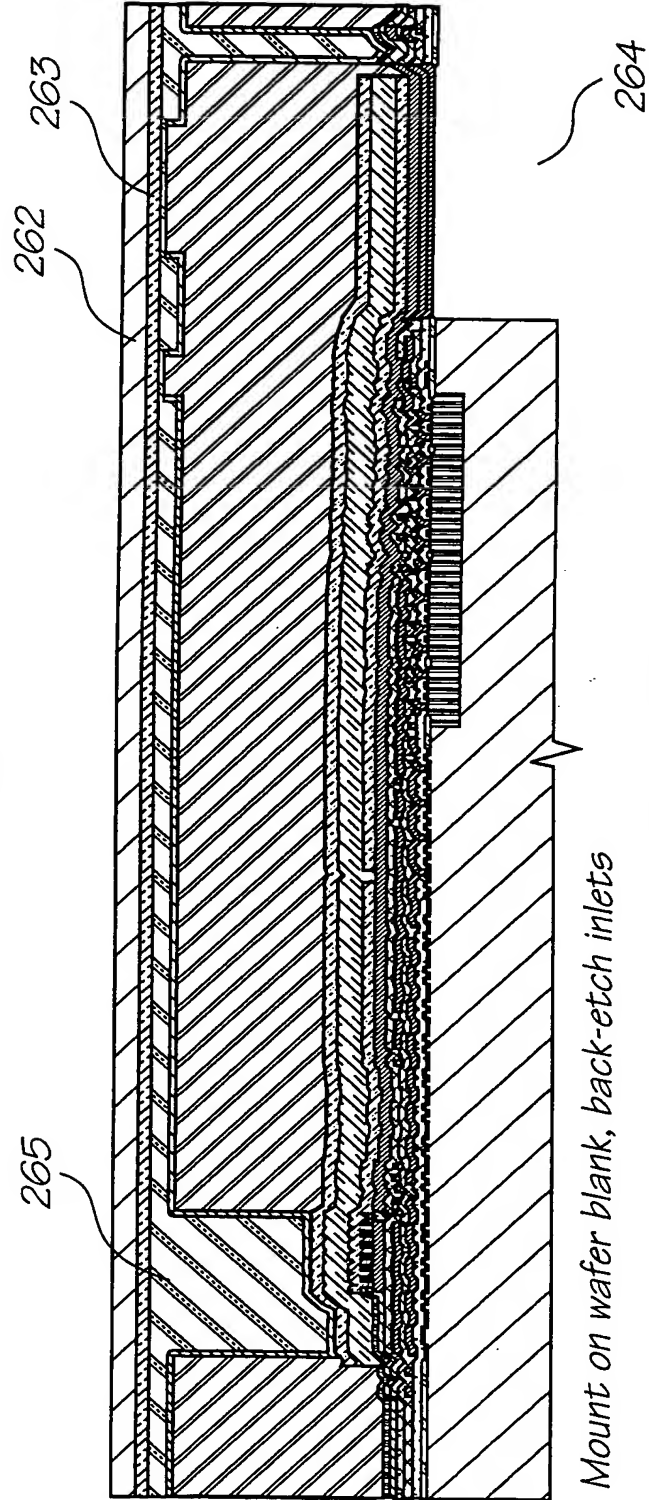


FIG. 68



Back-etch inlet mask

FIG. 70



Mount on wafer blank, back-etch inlets

FIG. 69

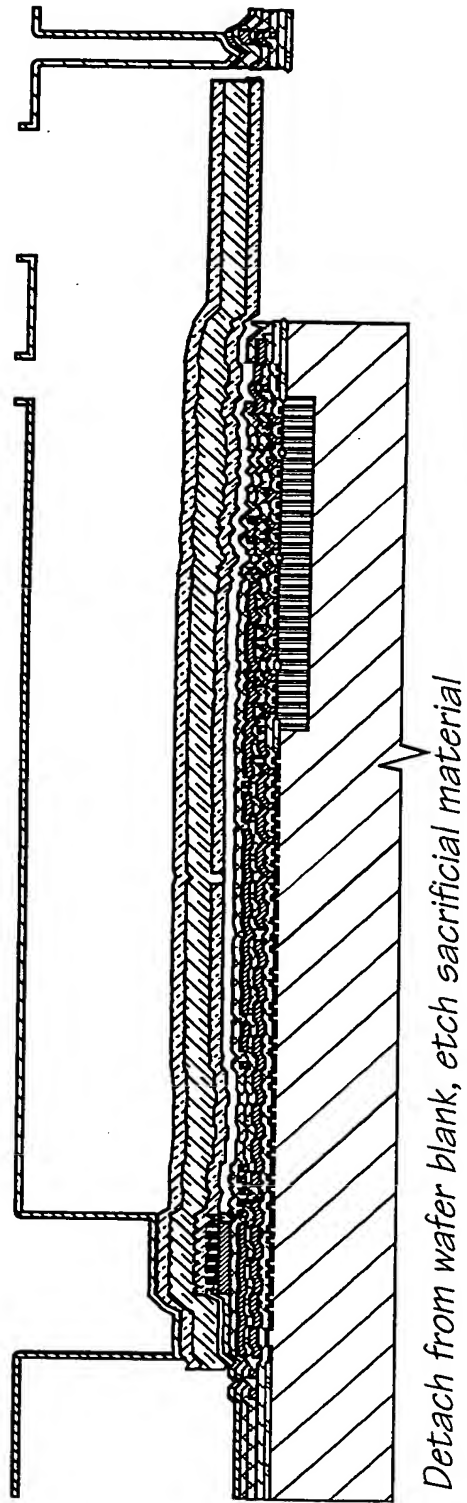


FIG. 71

47/81

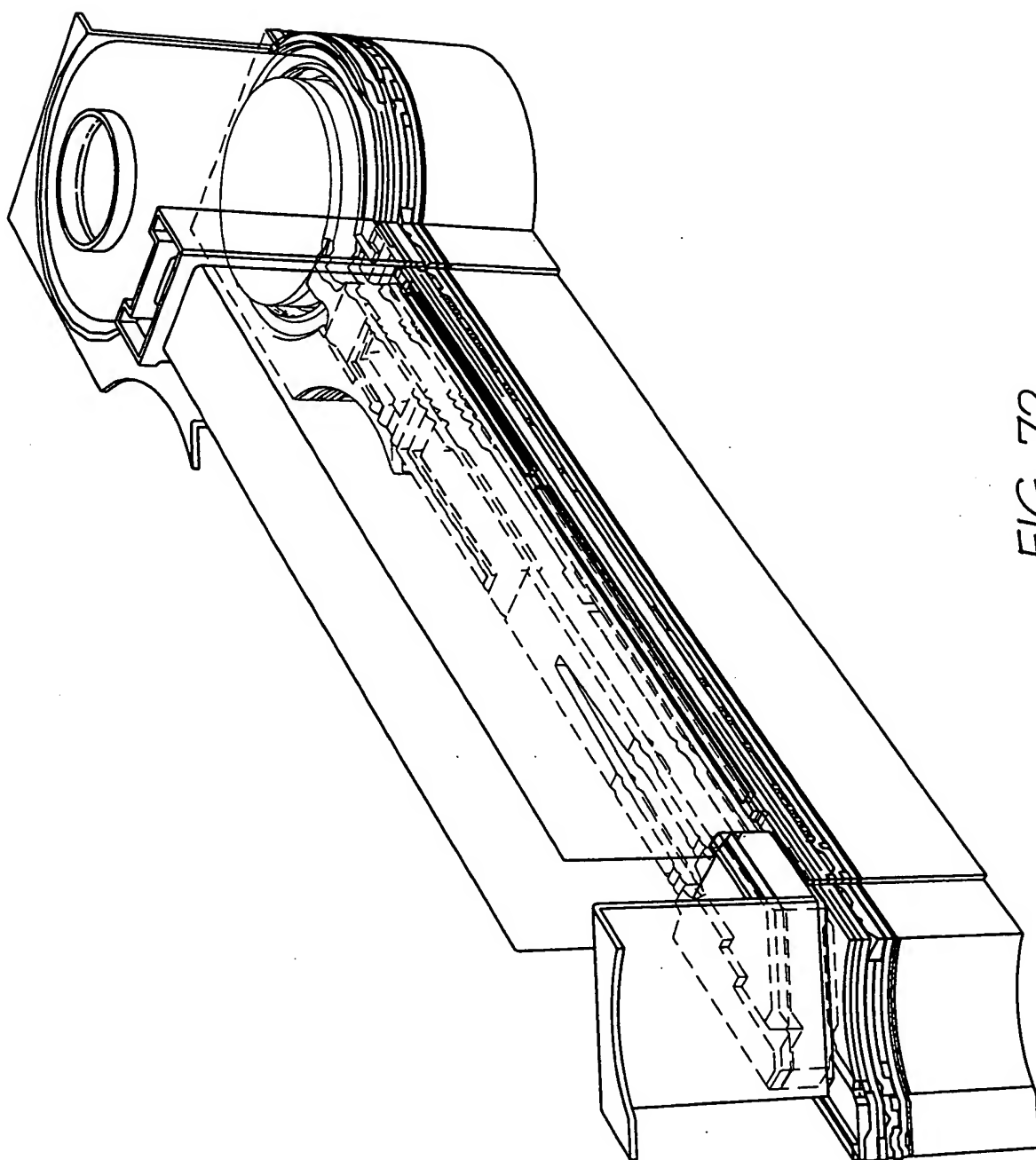


FIG. 72

48/81

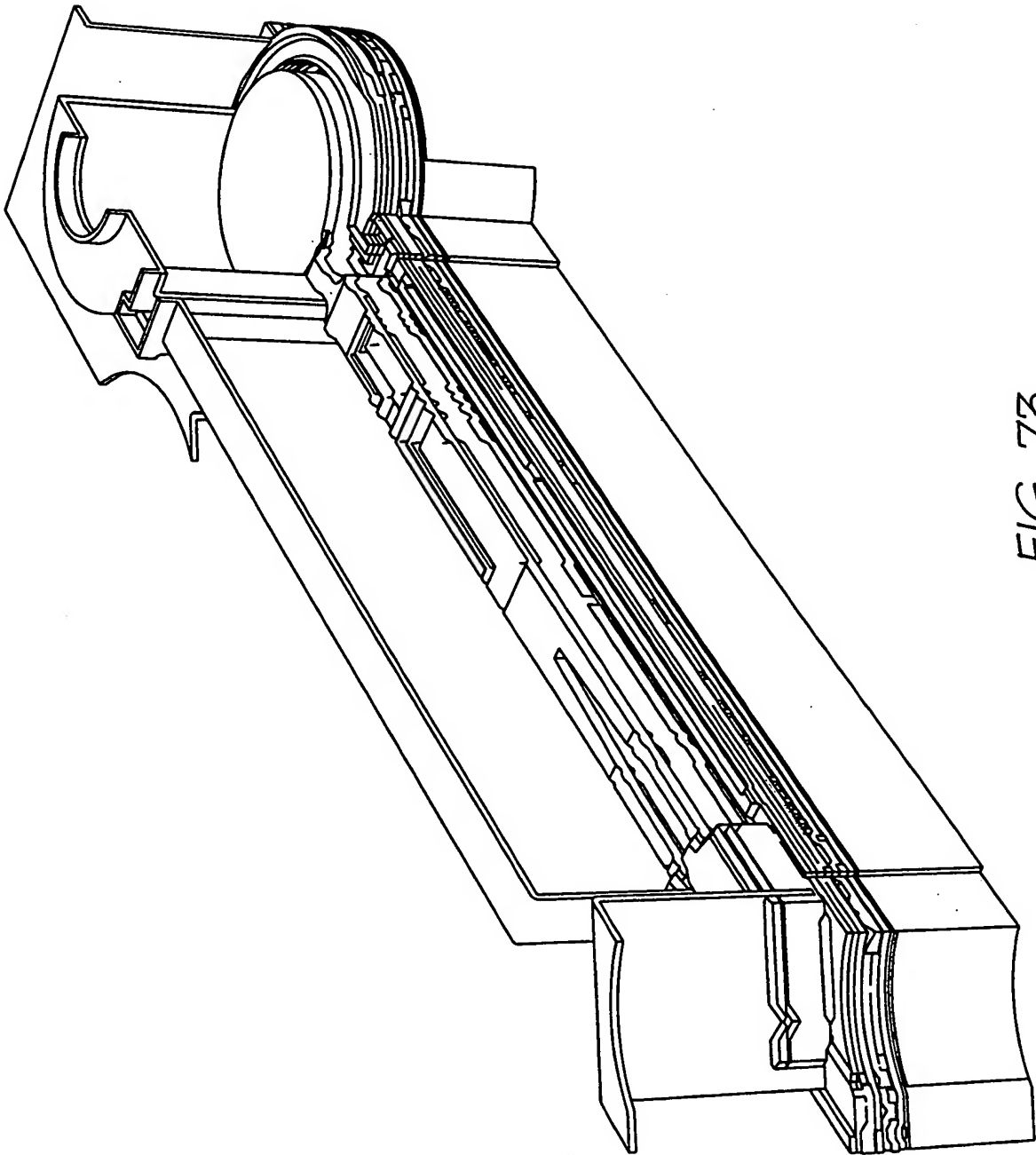


FIG. 73

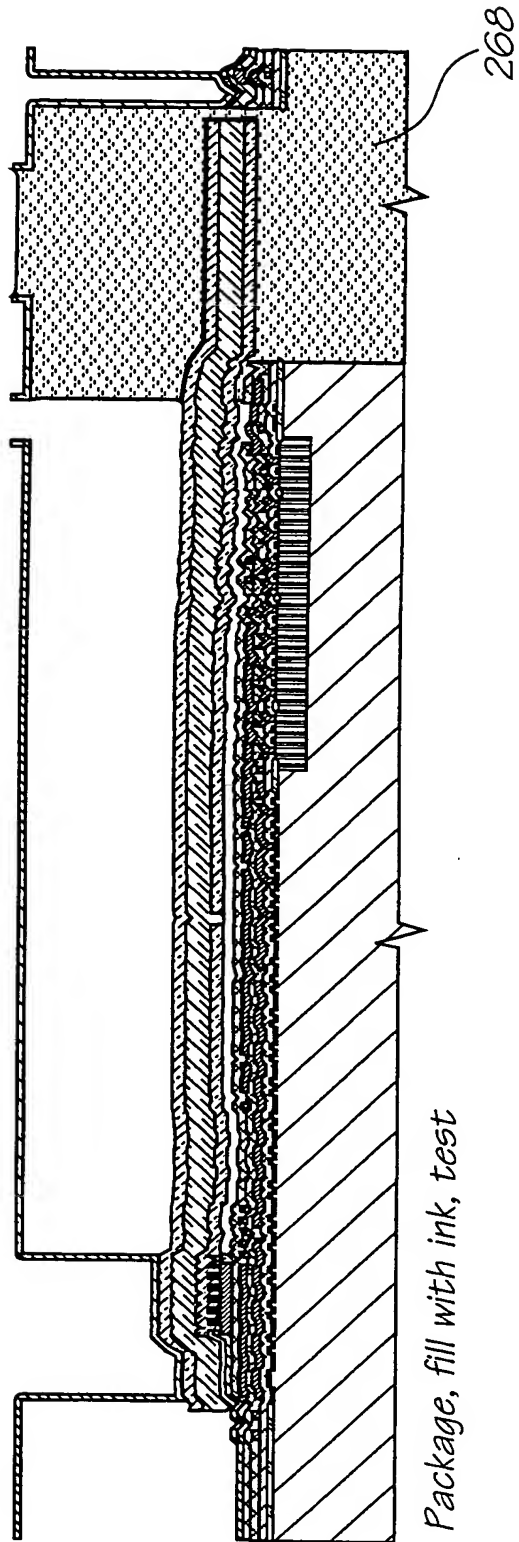
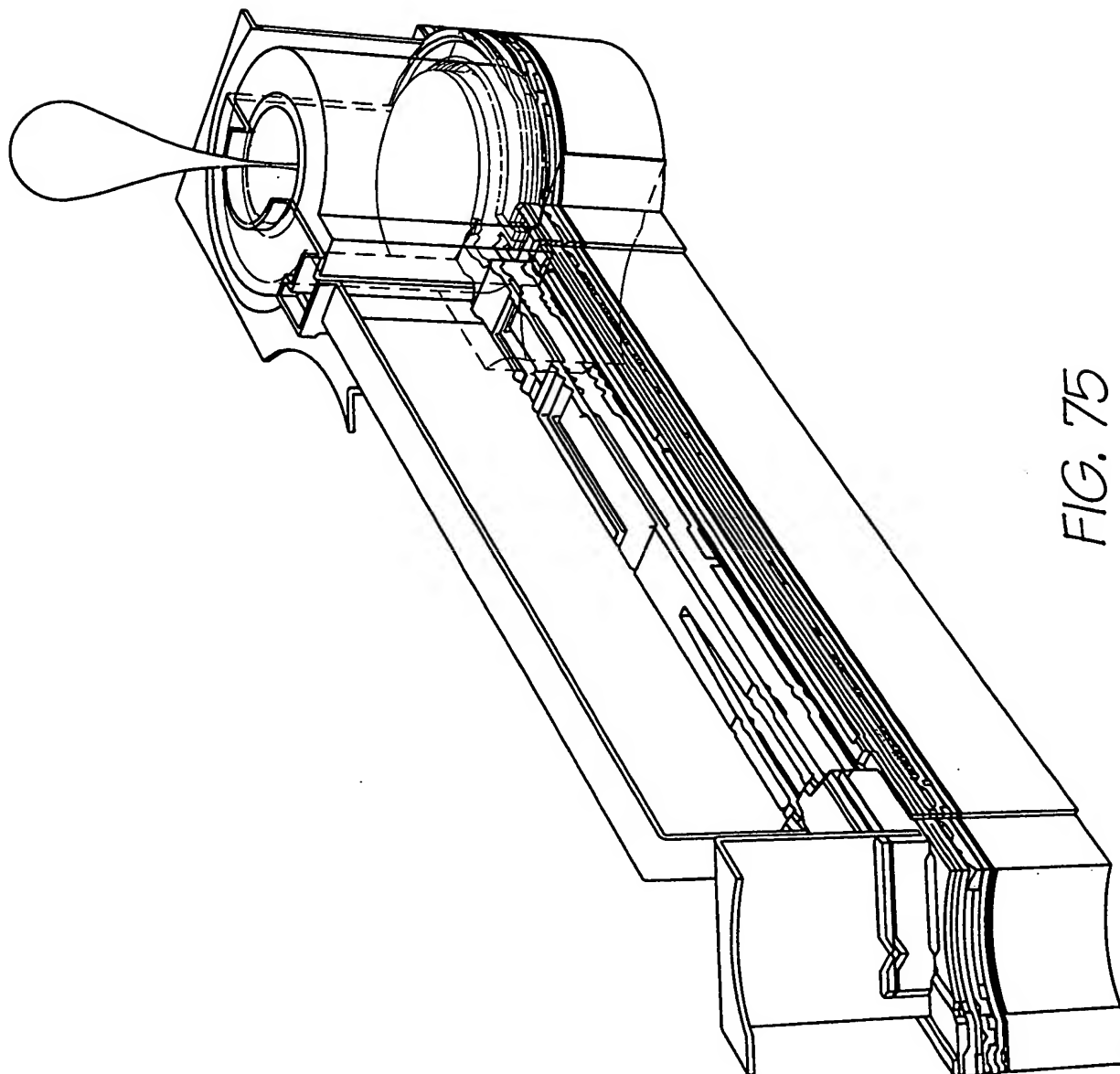


FIG. 74



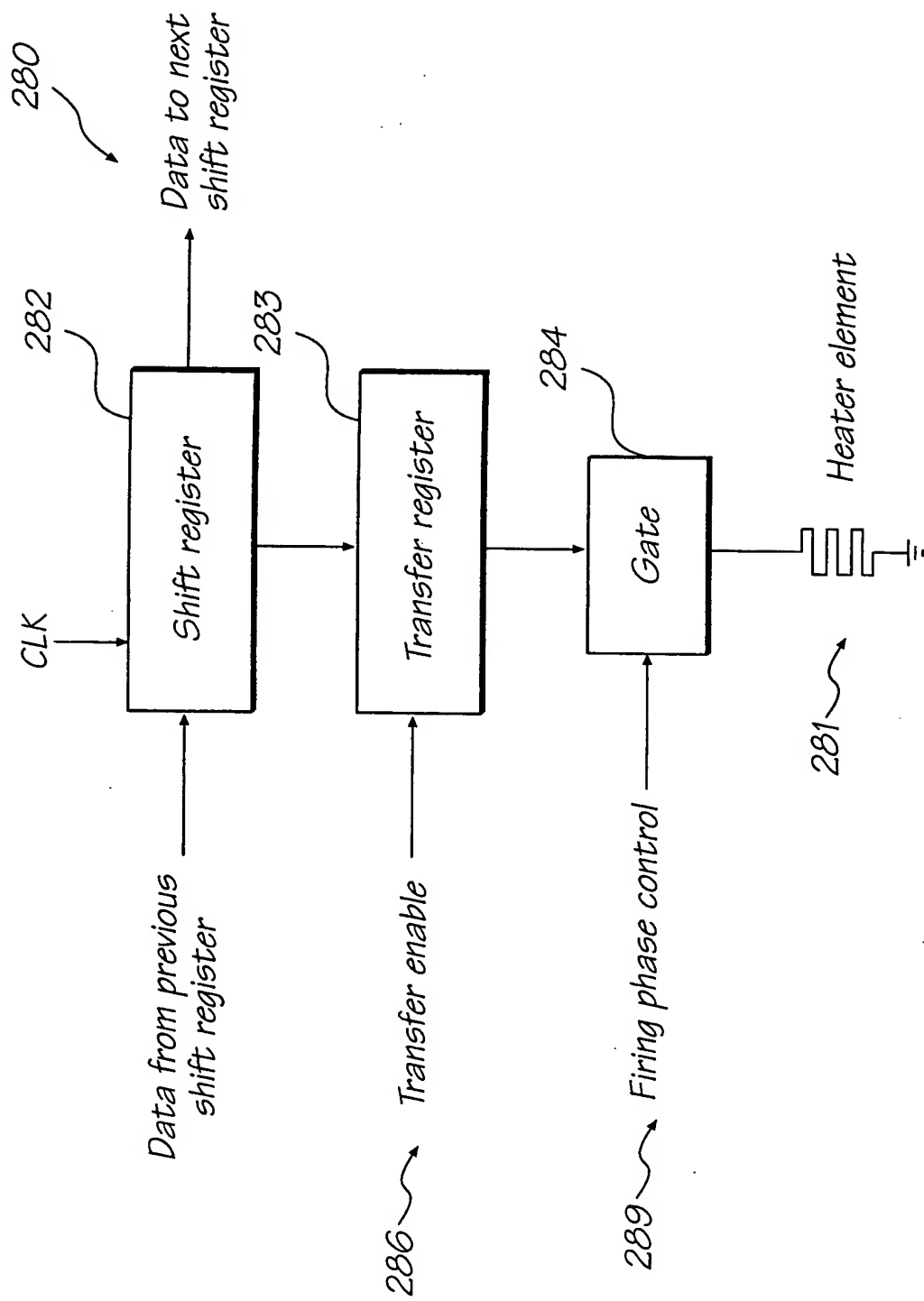


FIG. 76

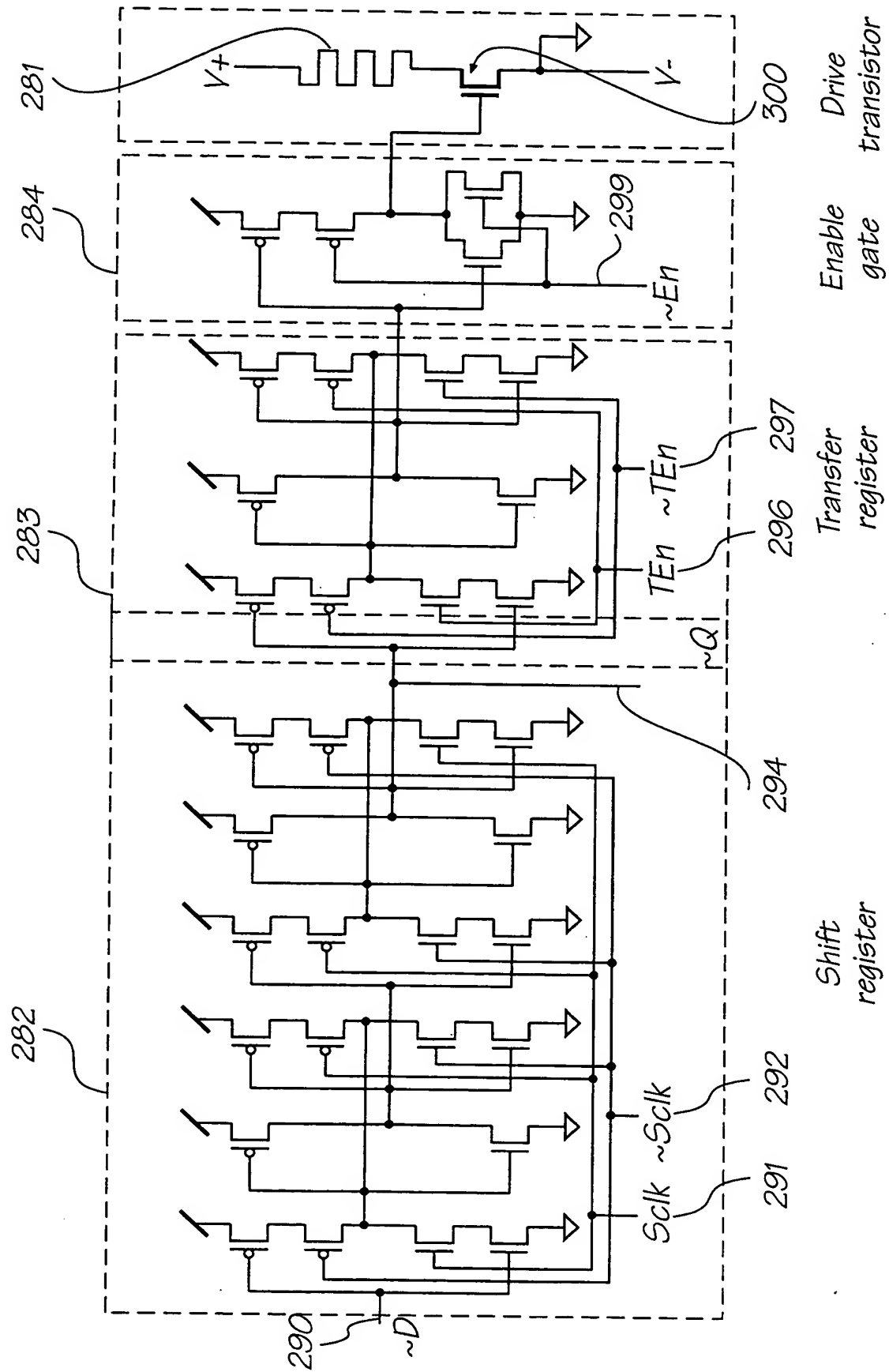


FIG. 77

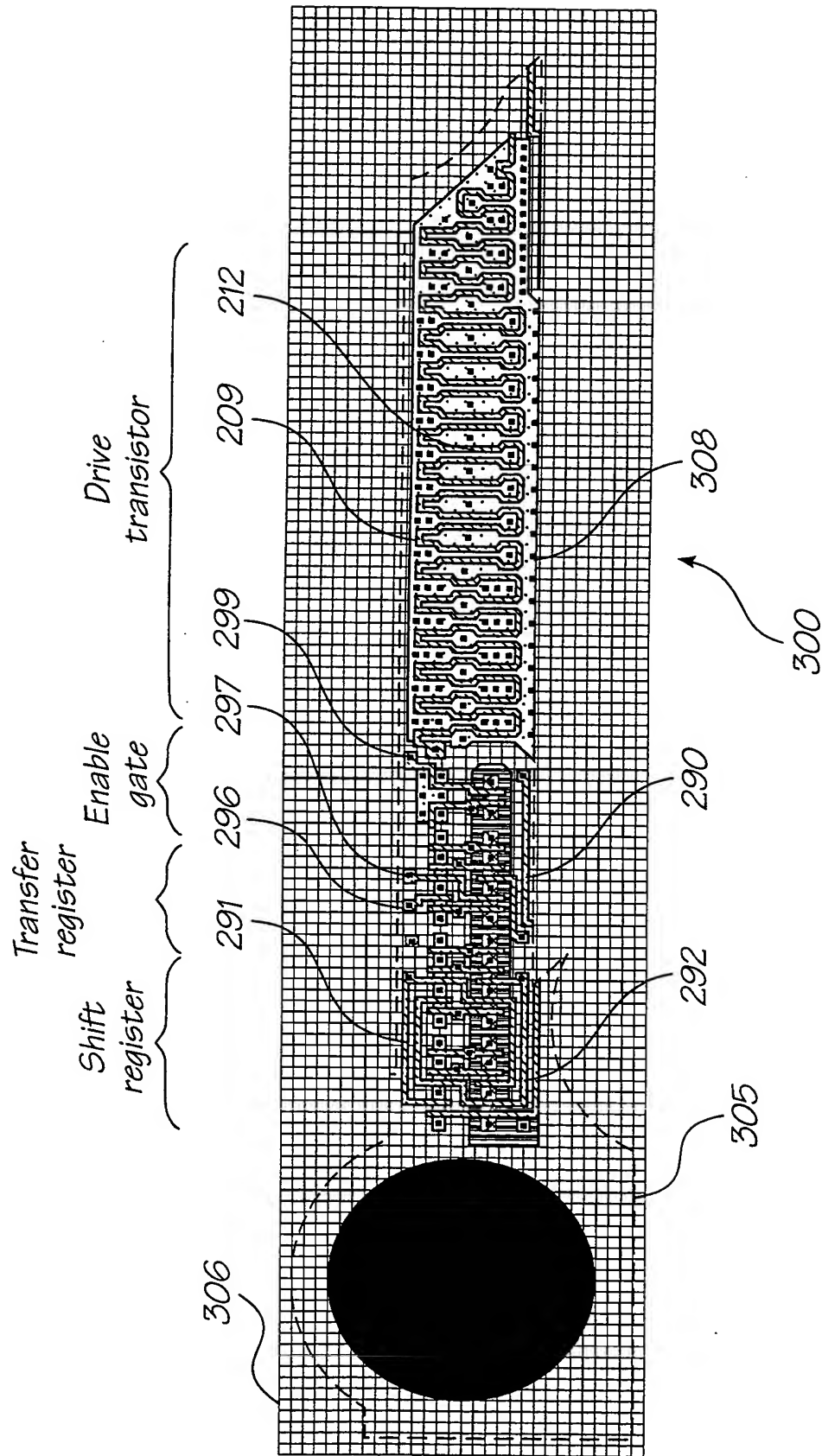


FIG. 79

296 297

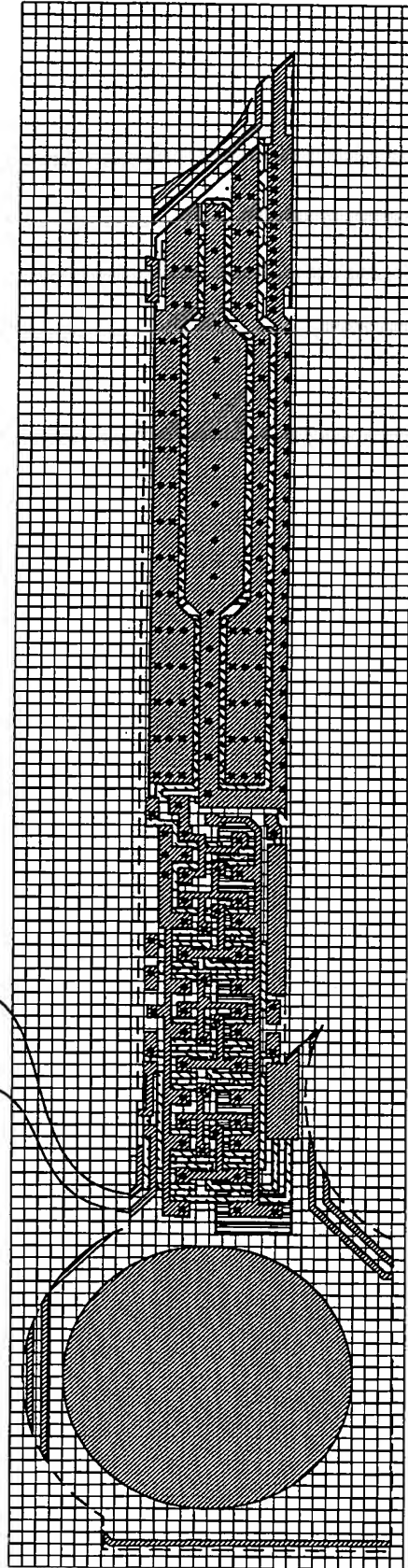


FIG. 80

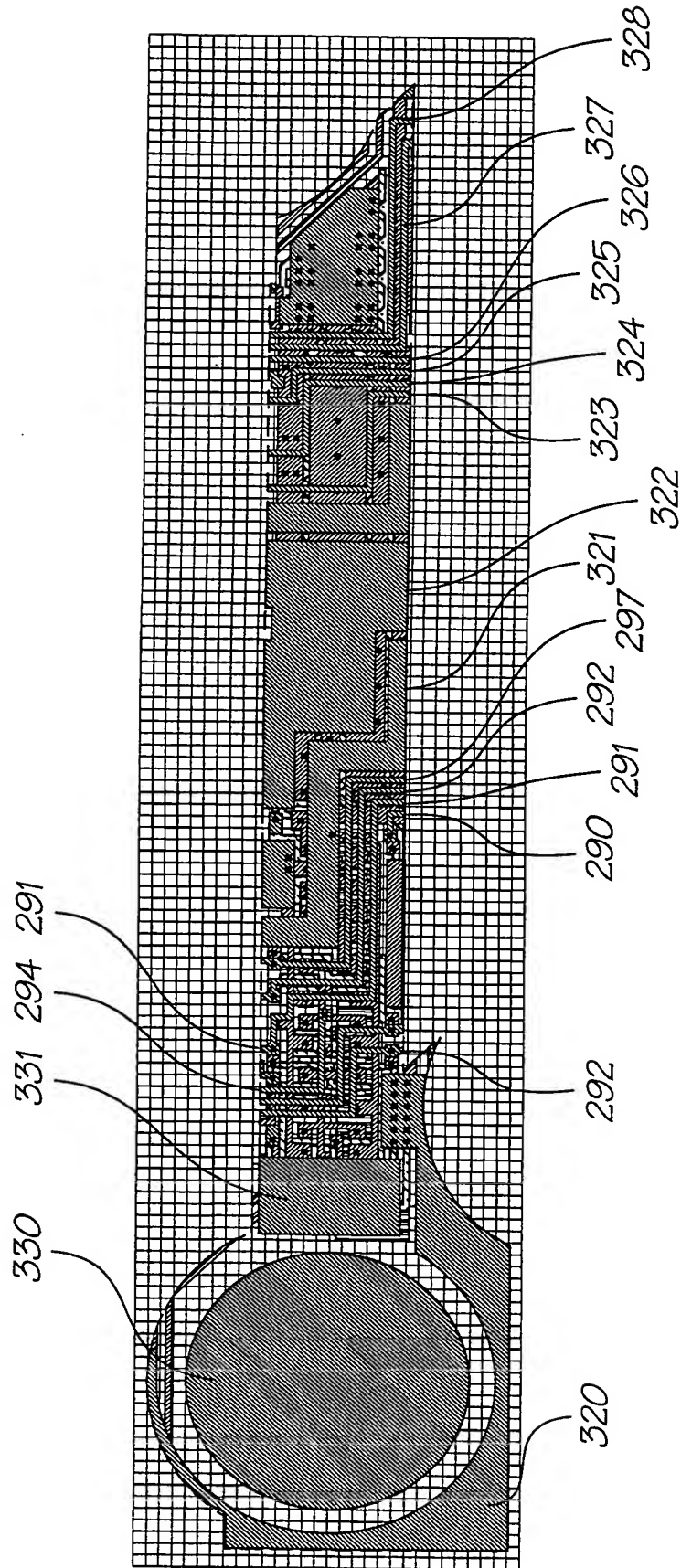


FIG. 81

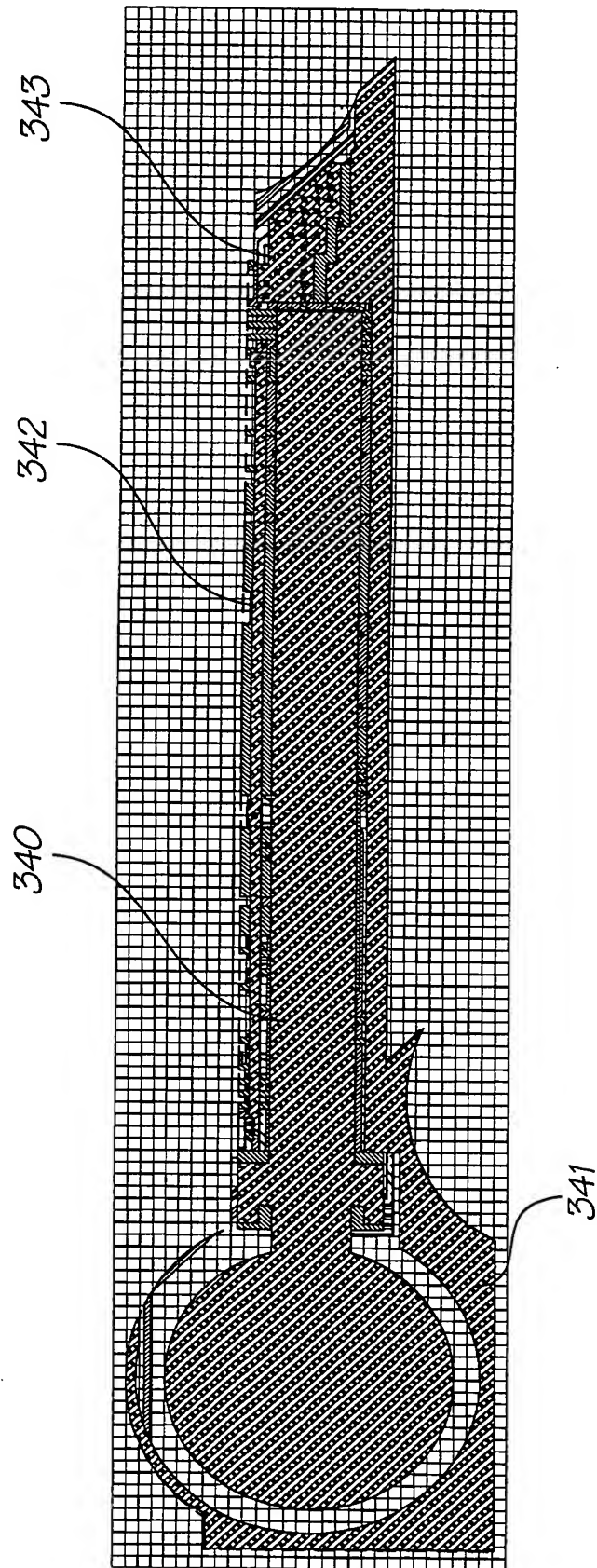


FIG. 82

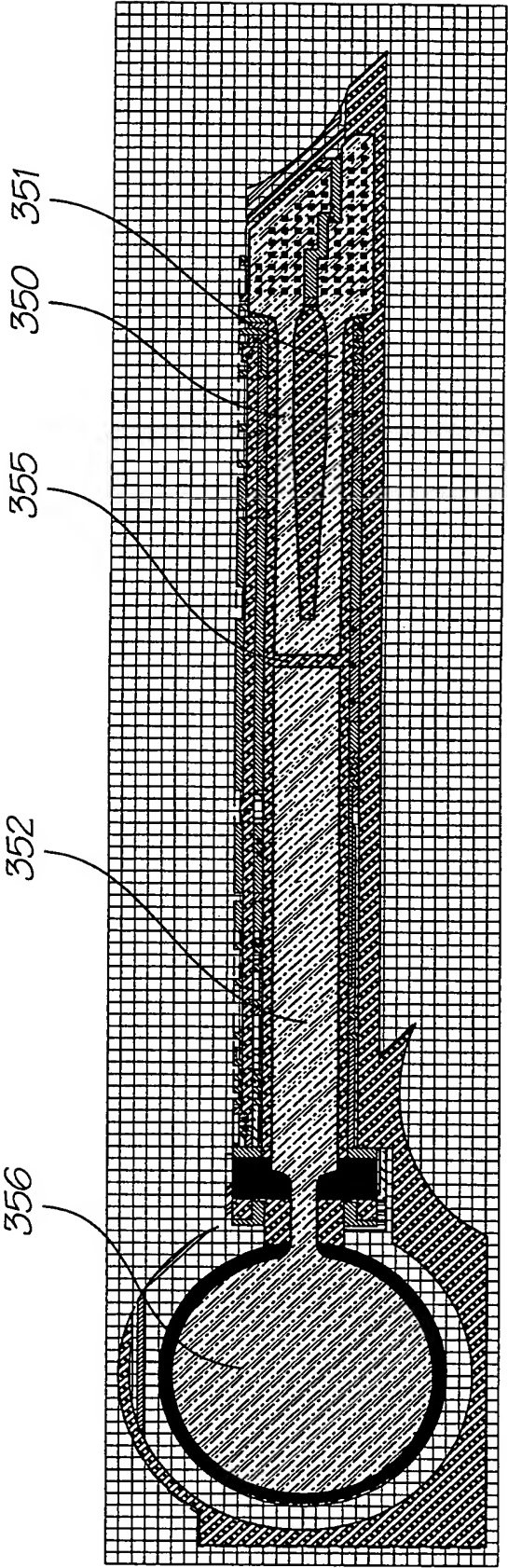


FIG. 83

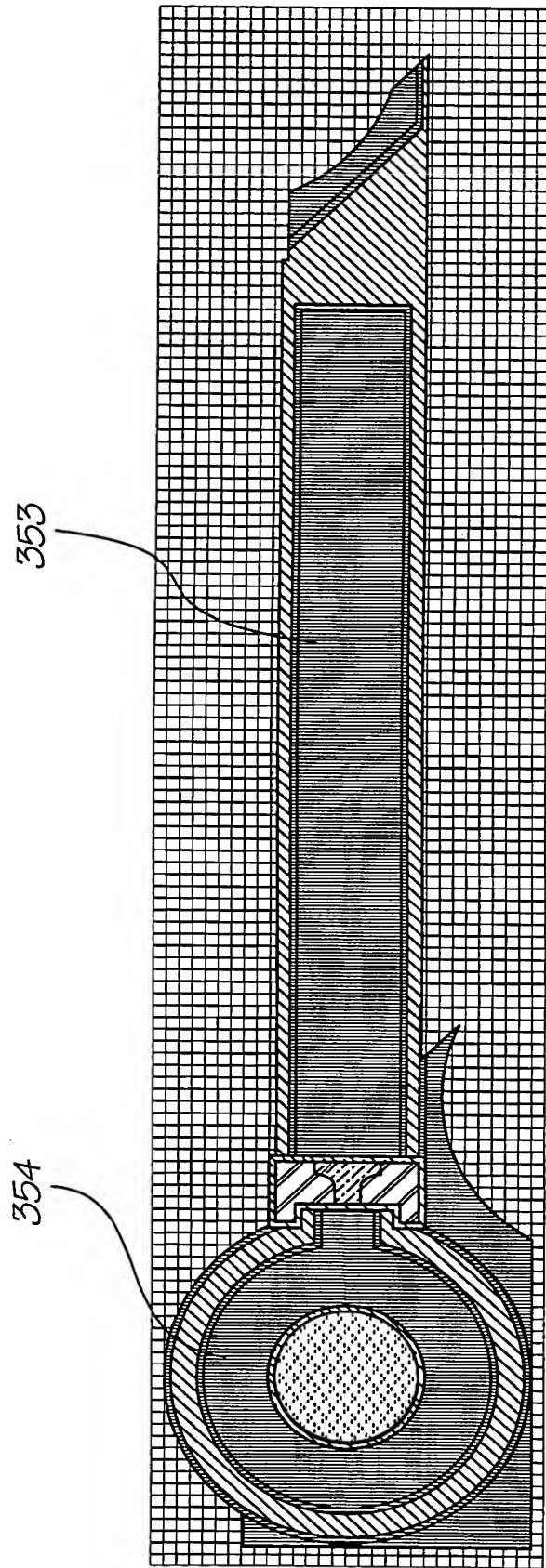


FIG. 84

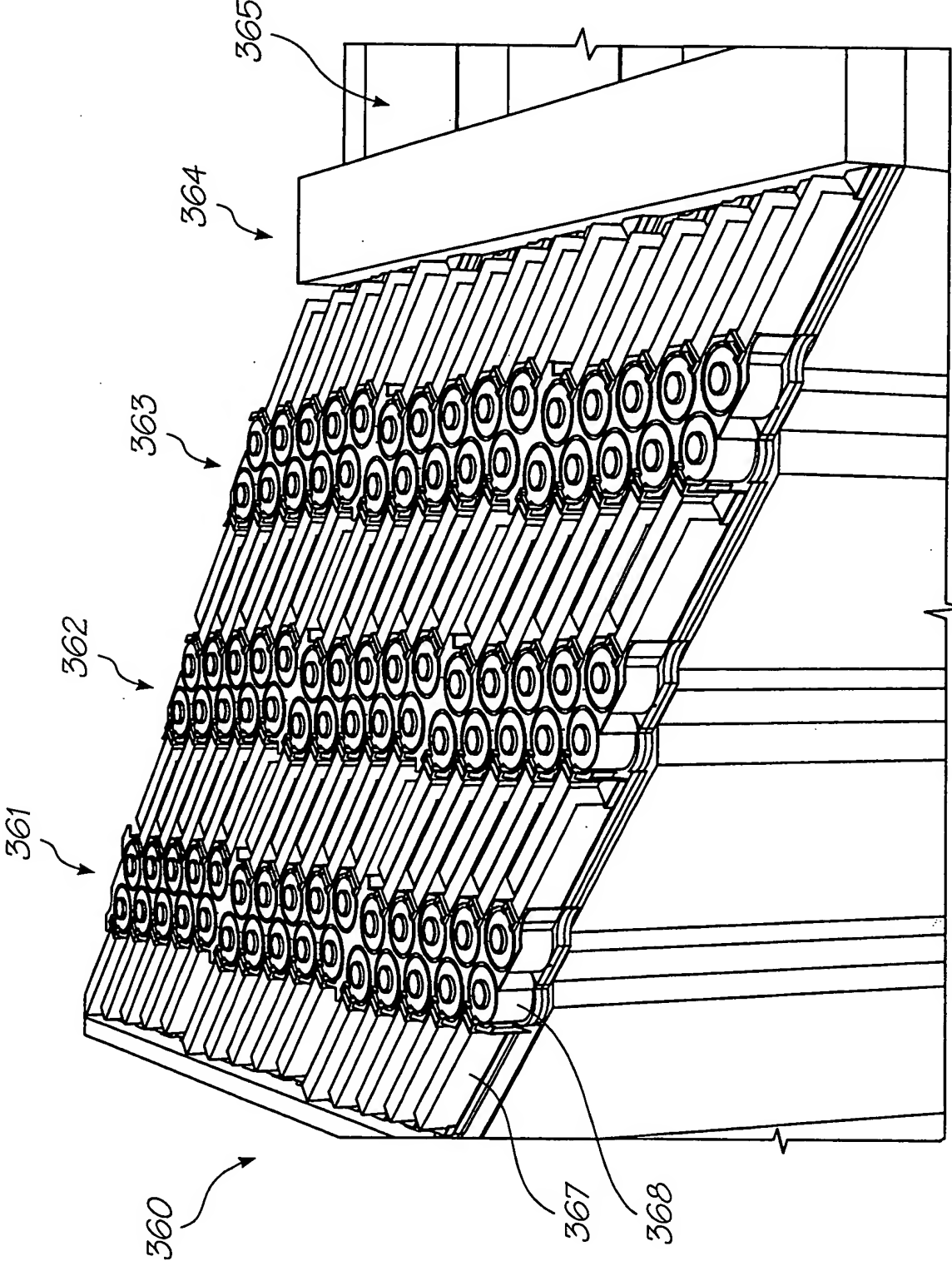


FIG. 85

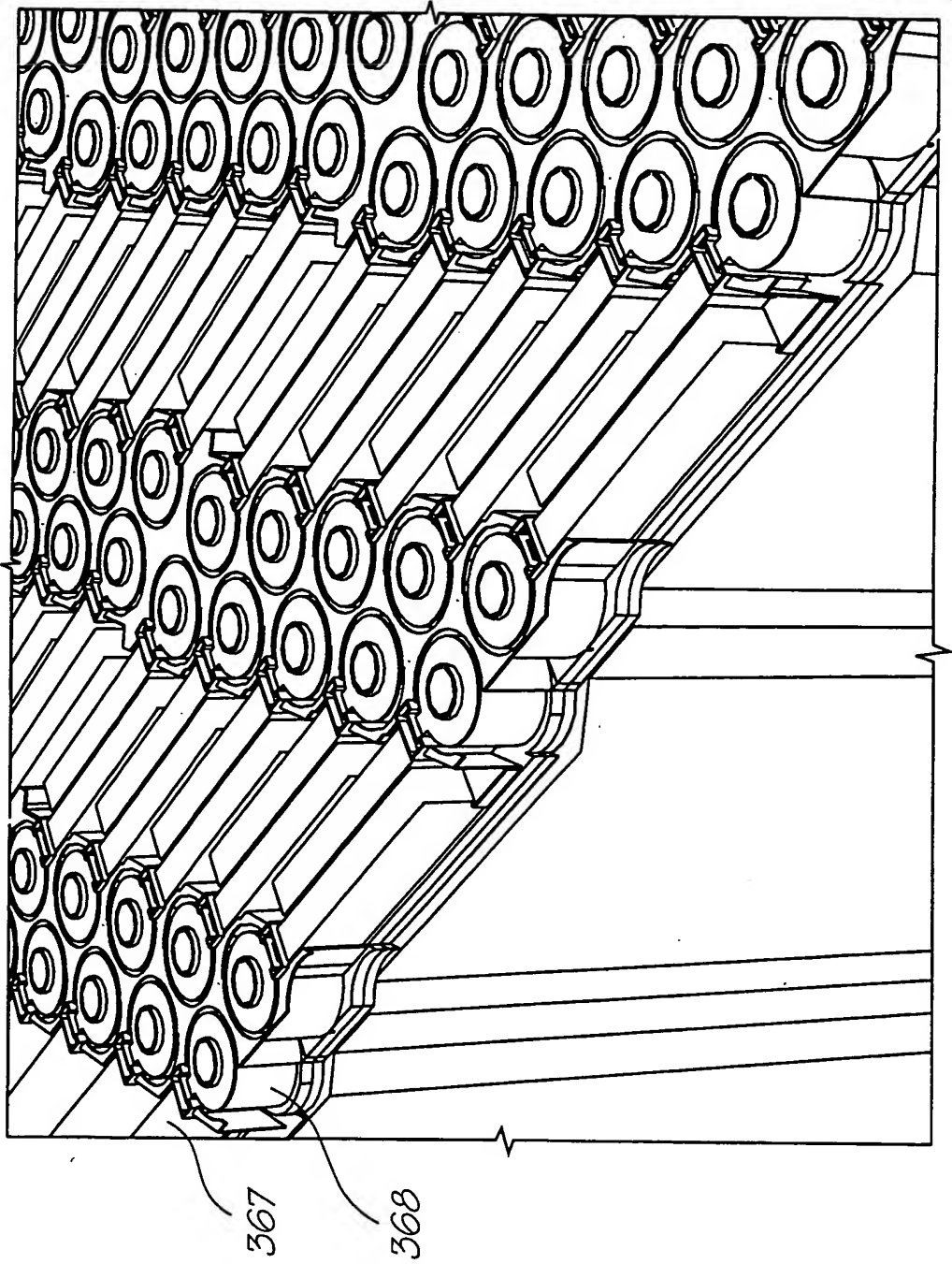


FIG. 86

62/81

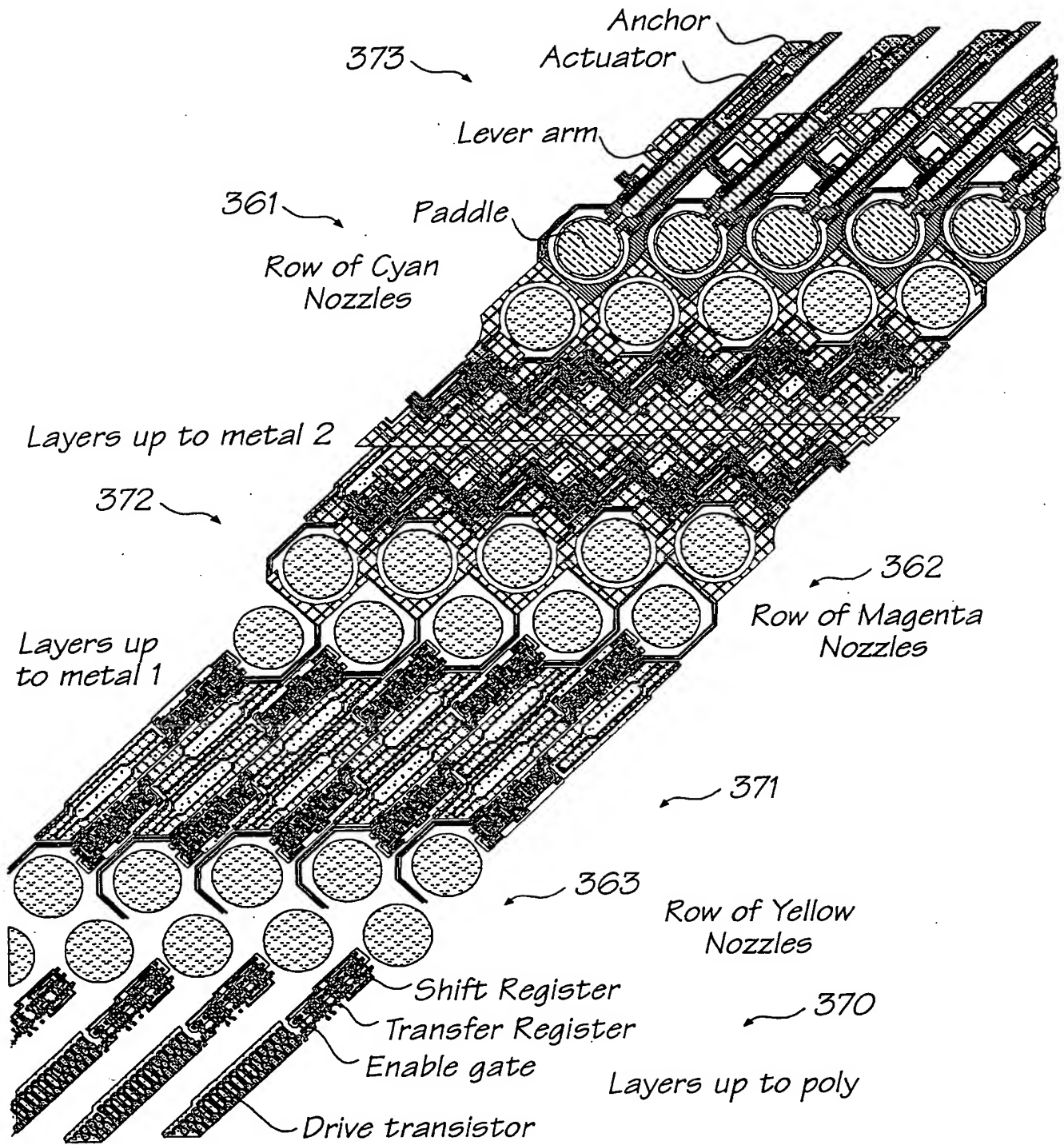


FIG. 87

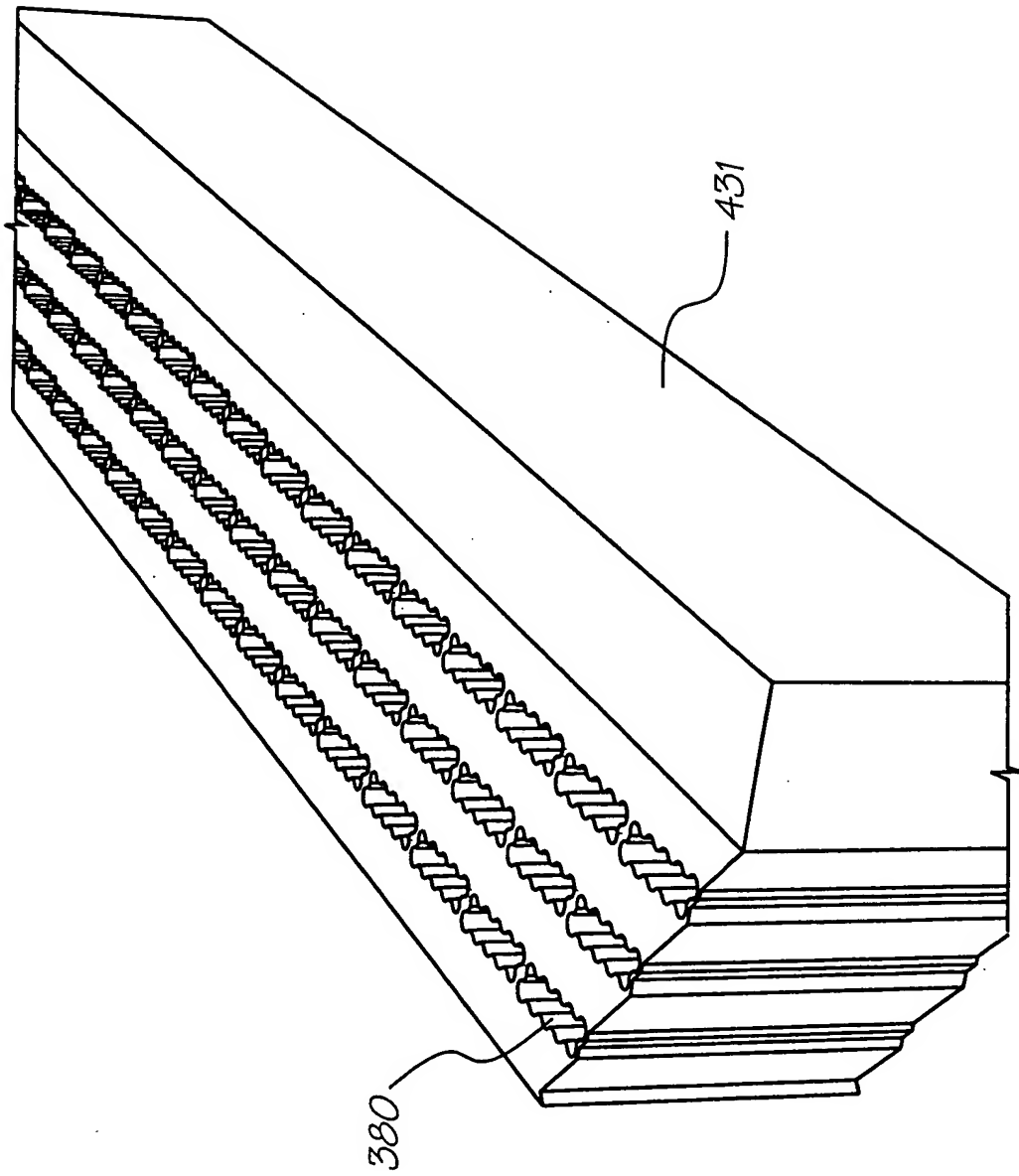


FIG. 88

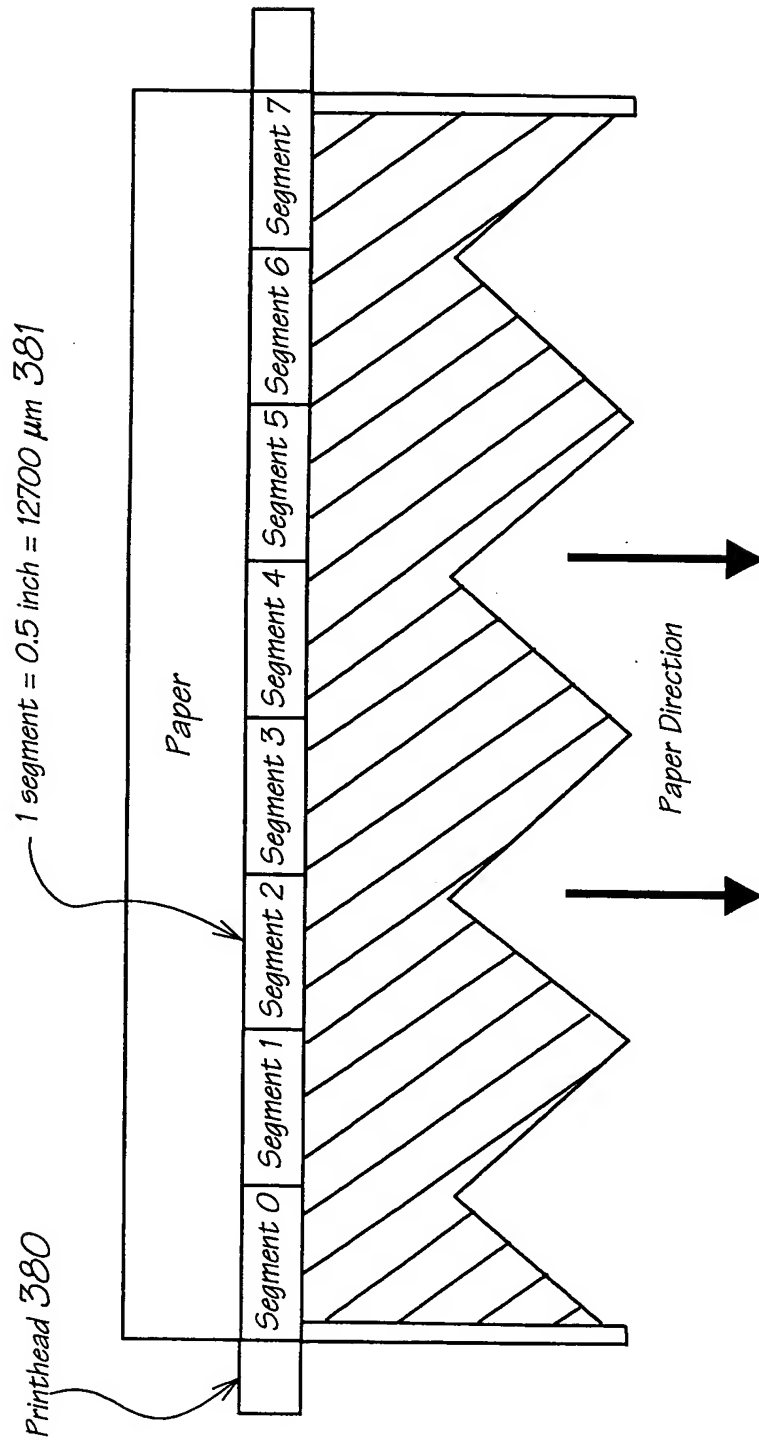
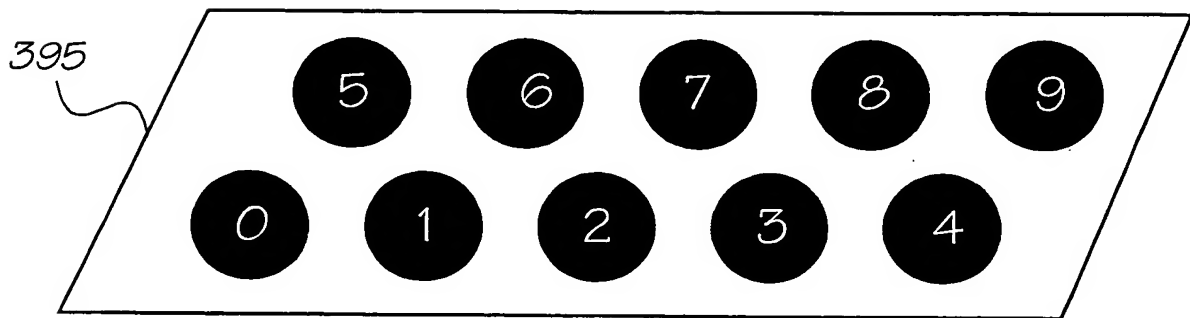


FIG. 89

65/81



A single pod, numbered by firing order

FIG. 90

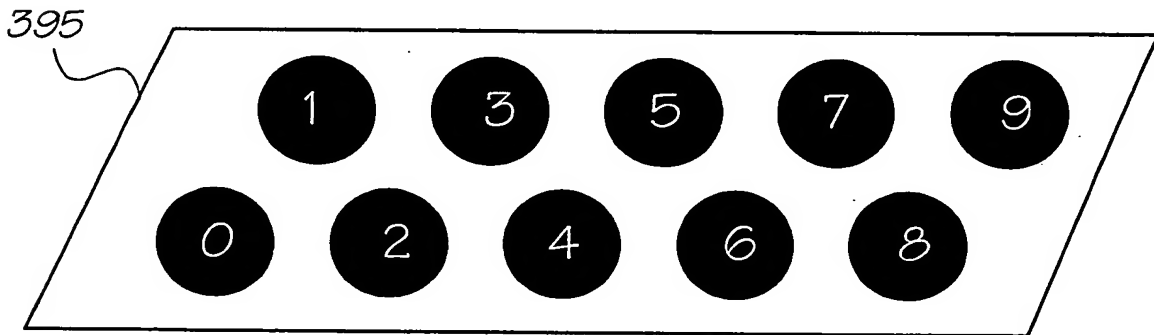


FIG. 91

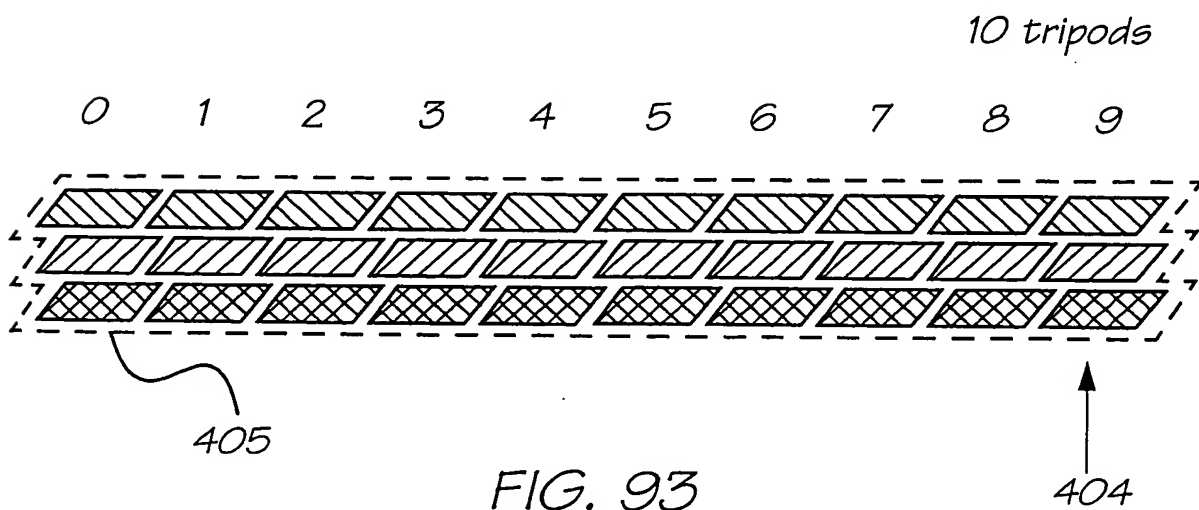


FIG. 93

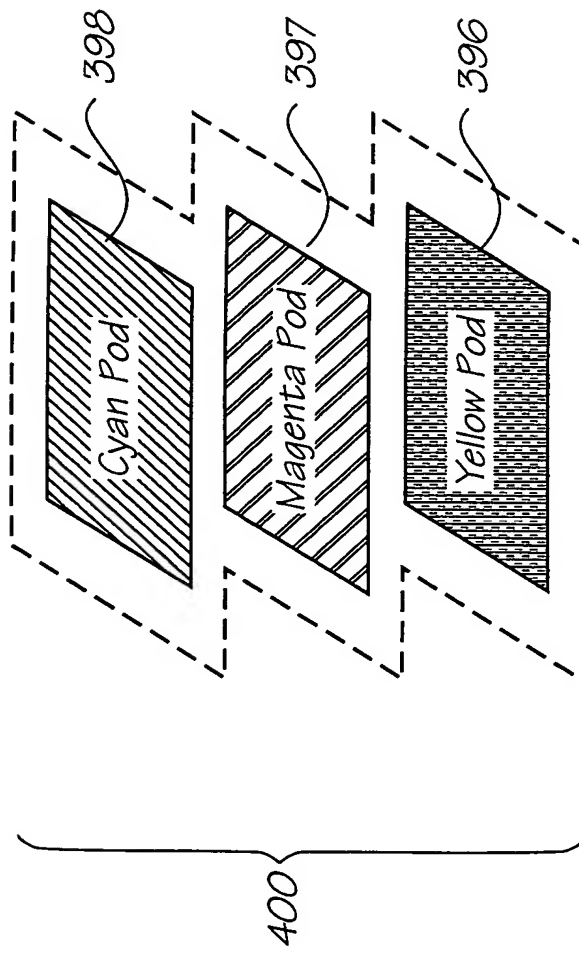


FIG. 92

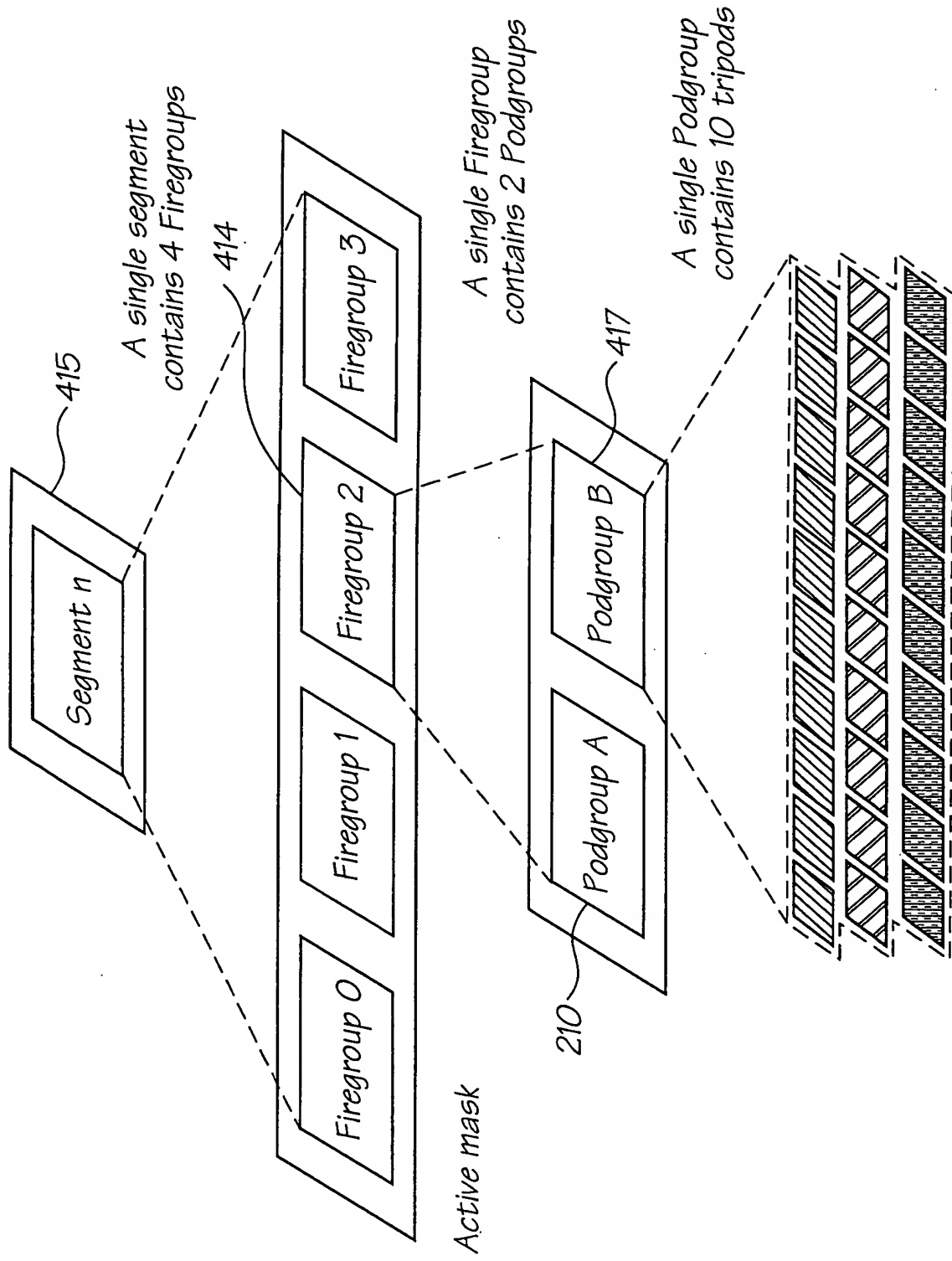


FIG. 94

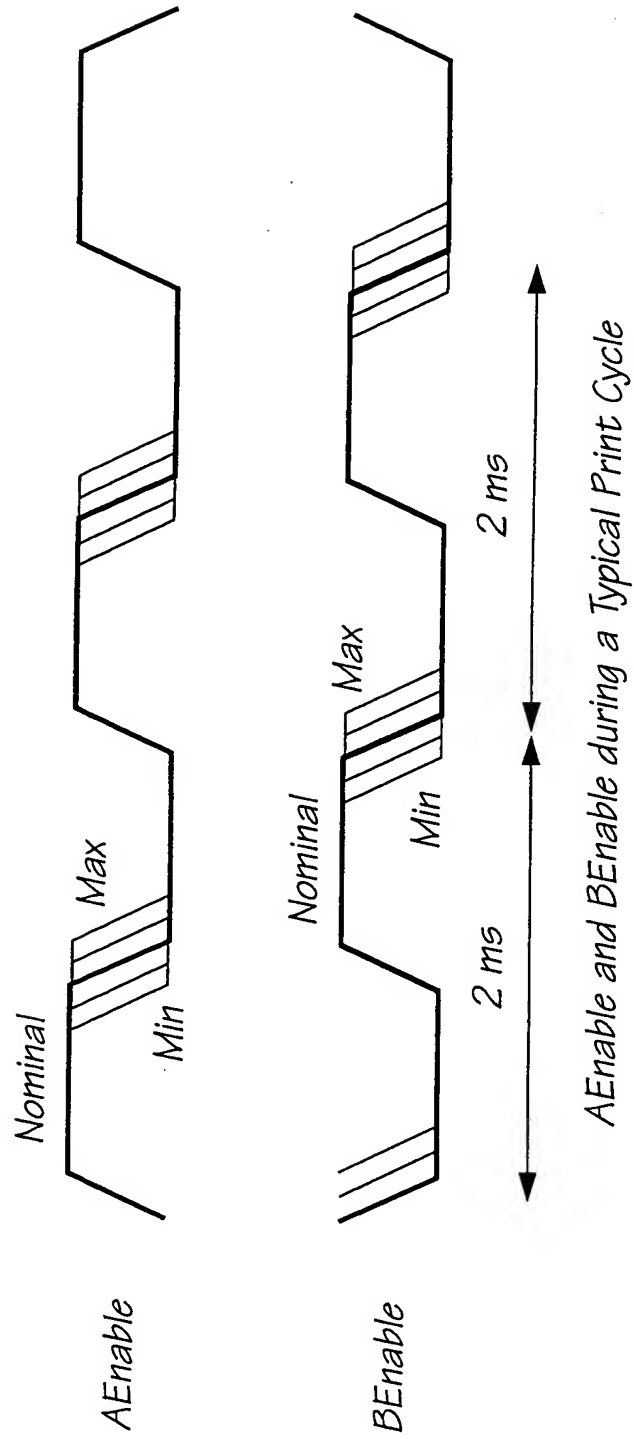


FIG. 95

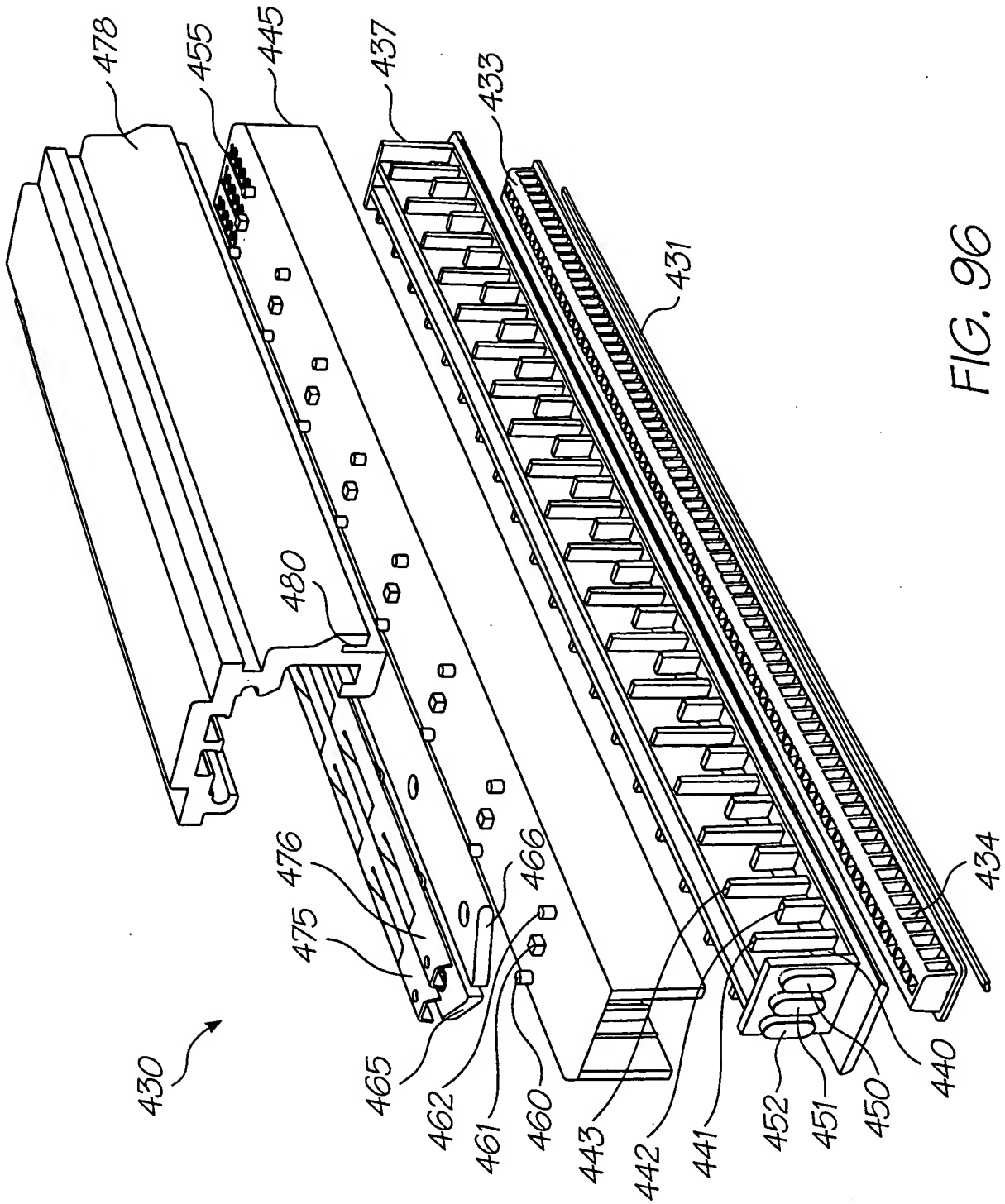


FIG. 96

70/81

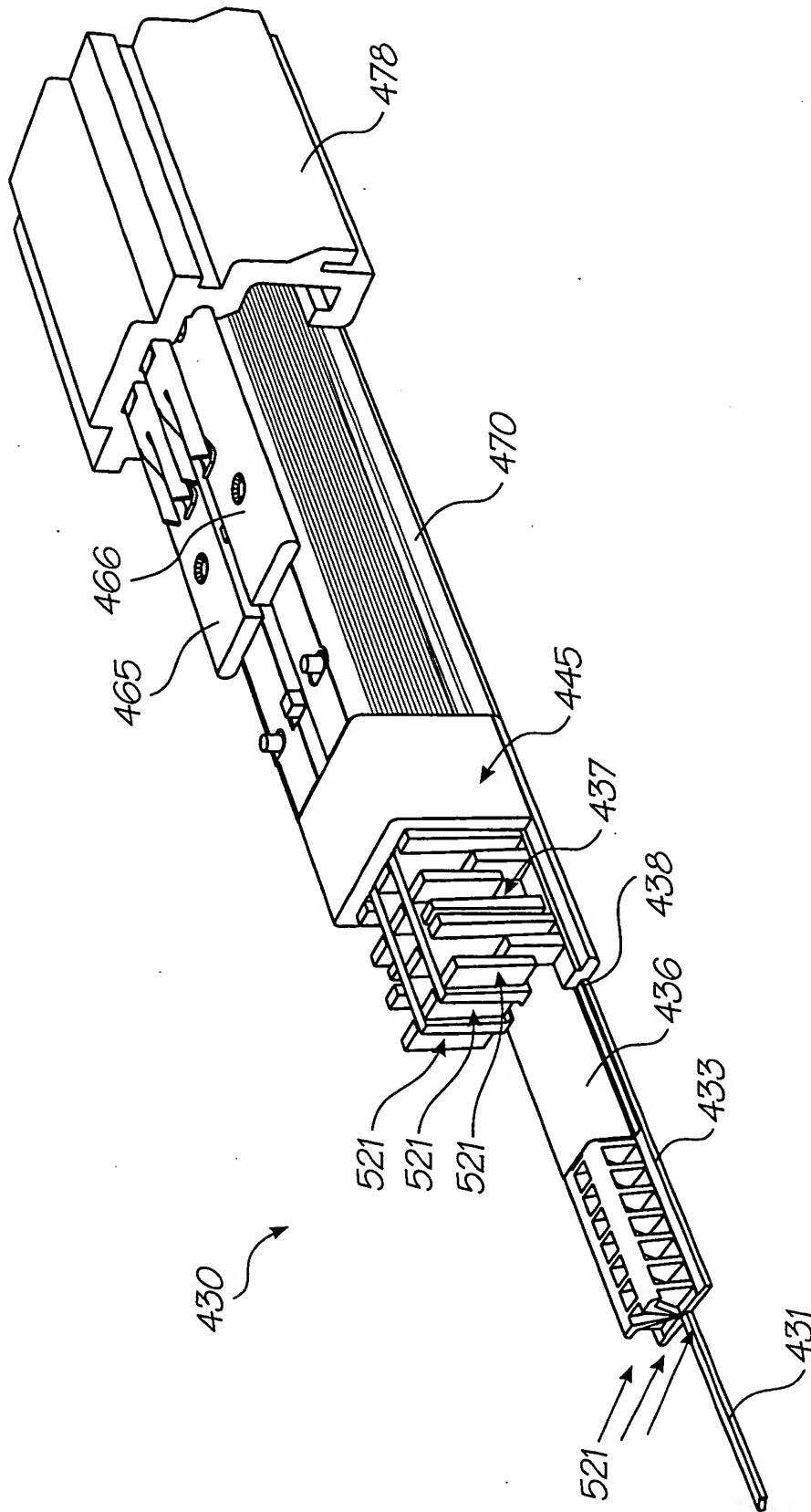


FIG. 97

72/81

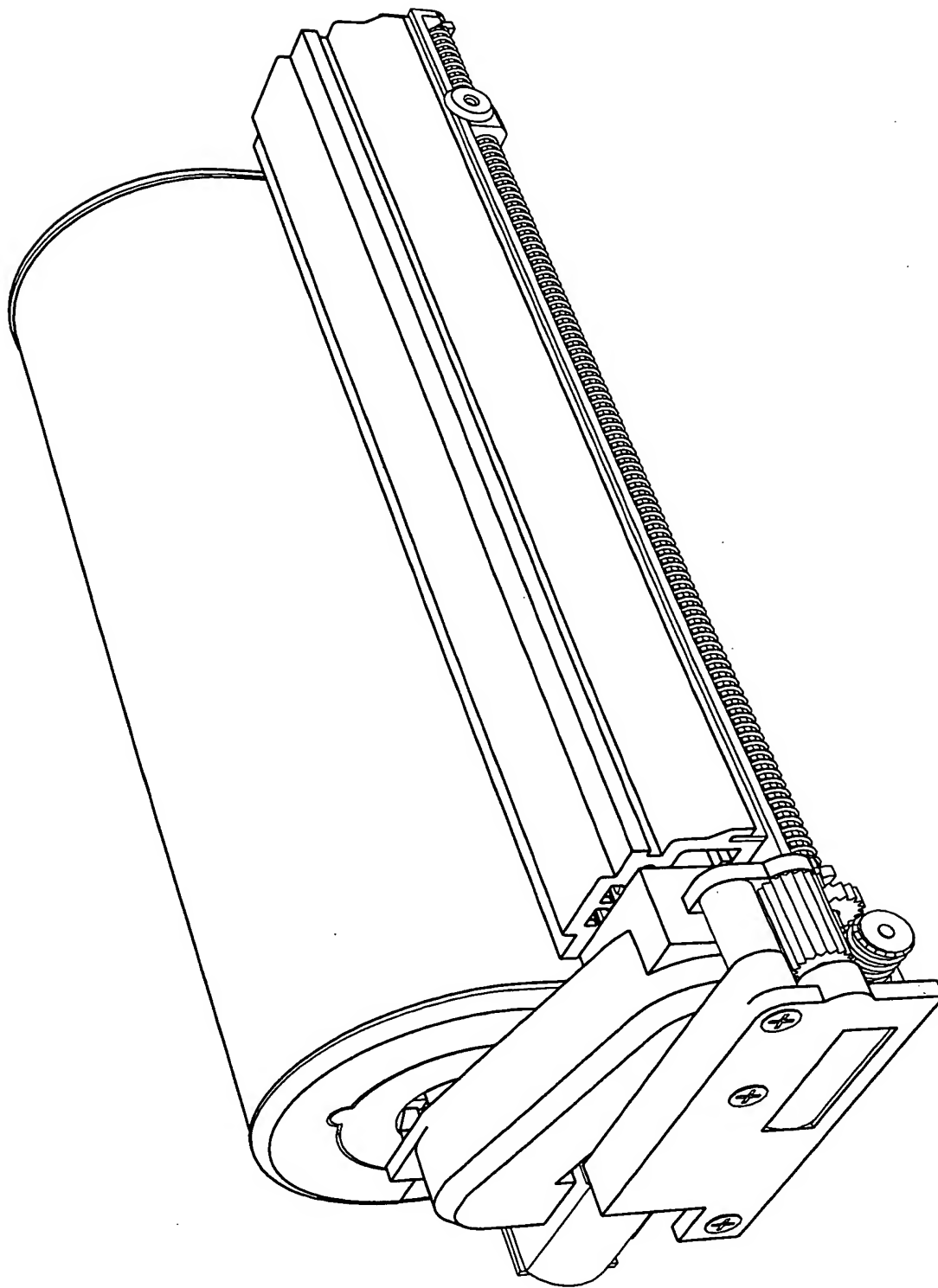


FIG. 99

73/81

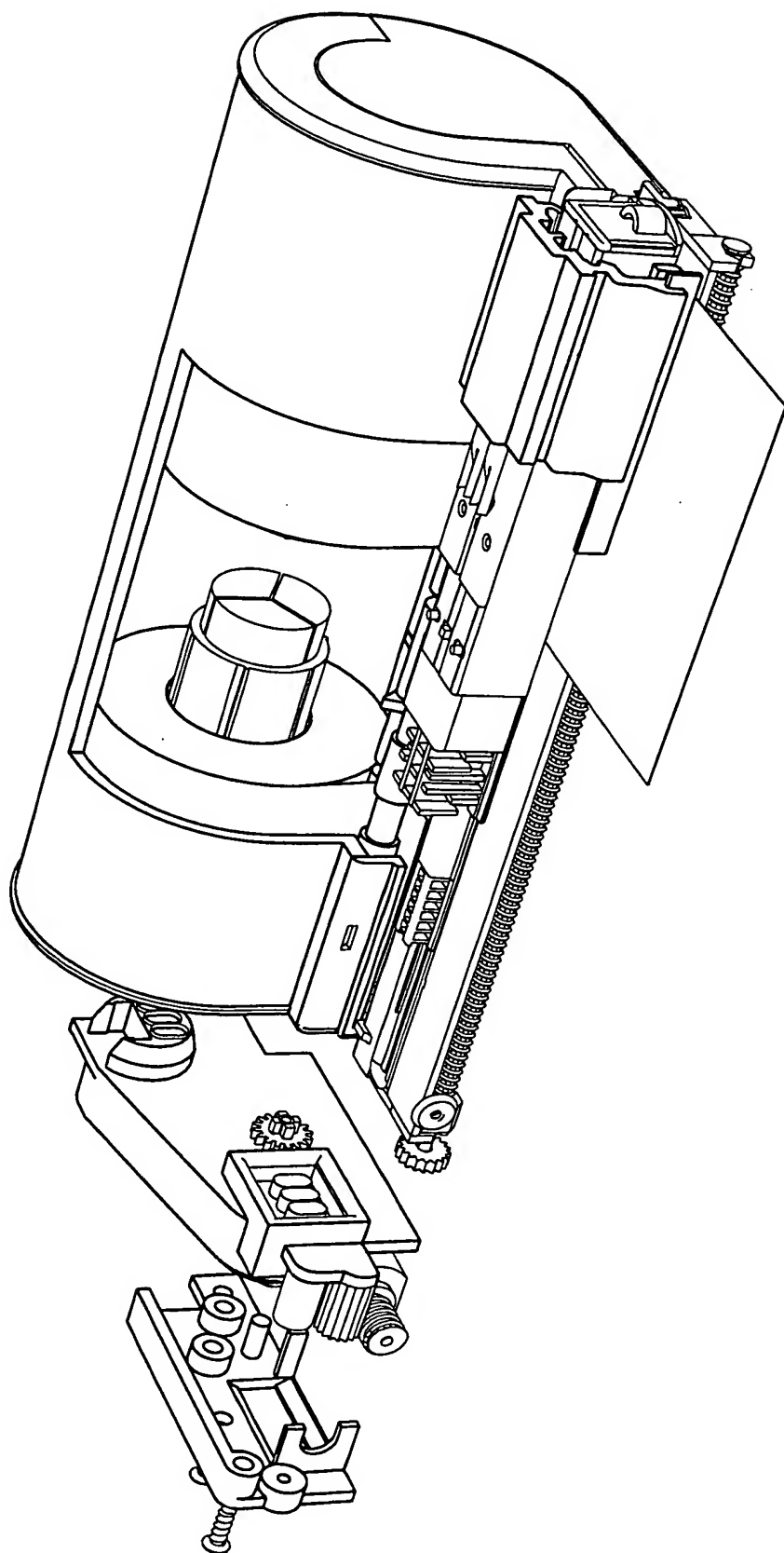


FIG. 100

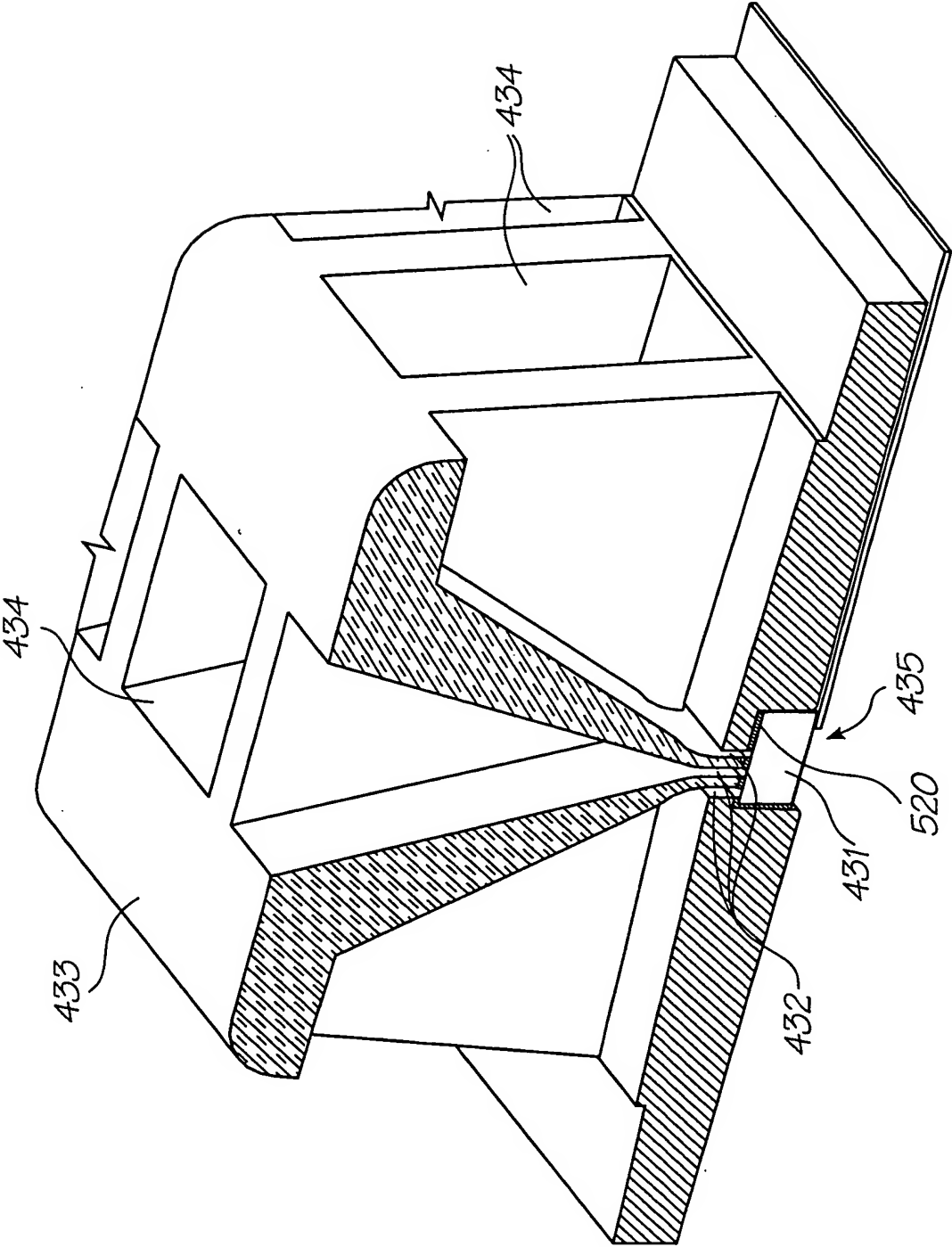


FIG. 101

75/81

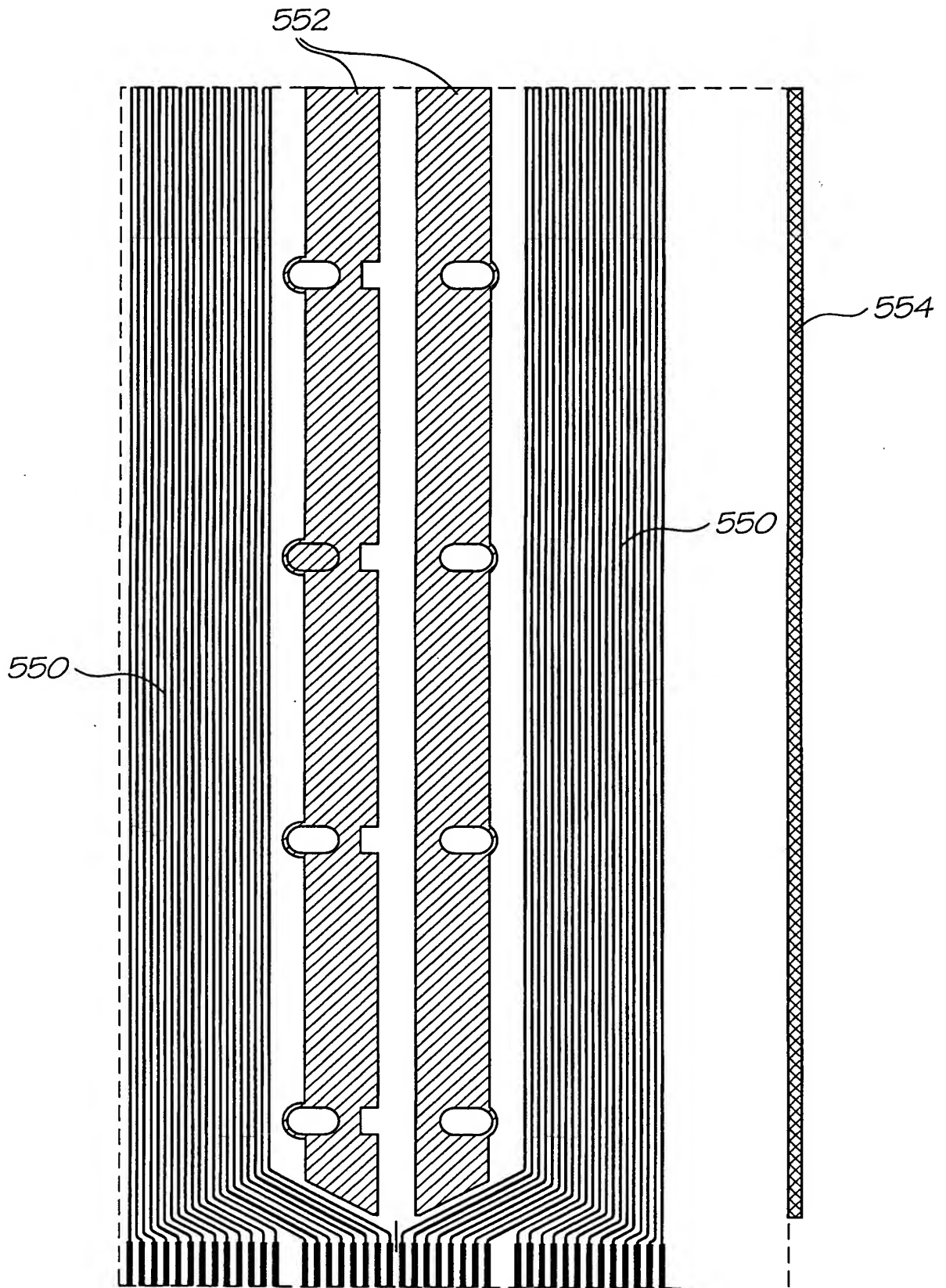


FIG. 102

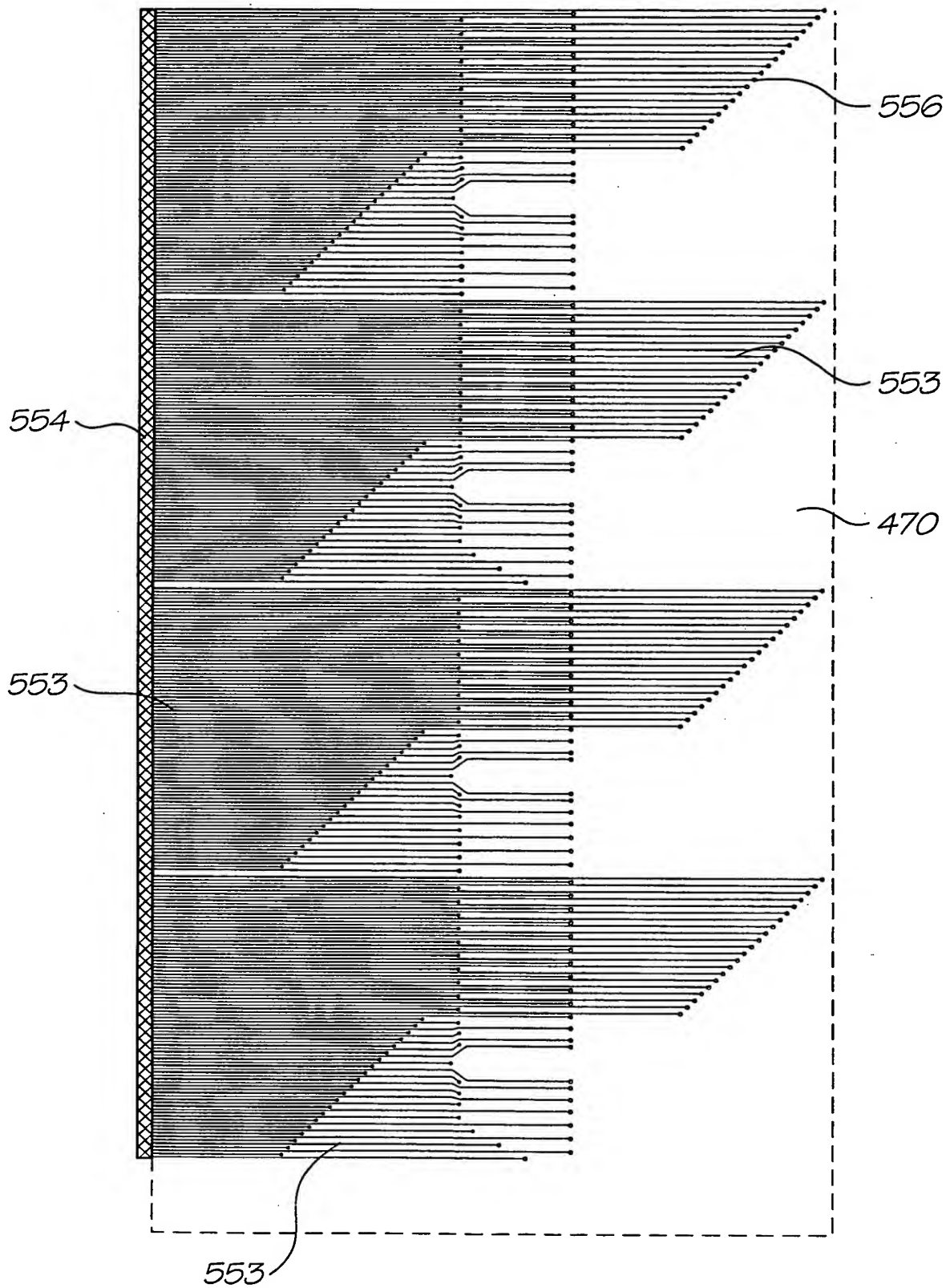


FIG. 103

77/81

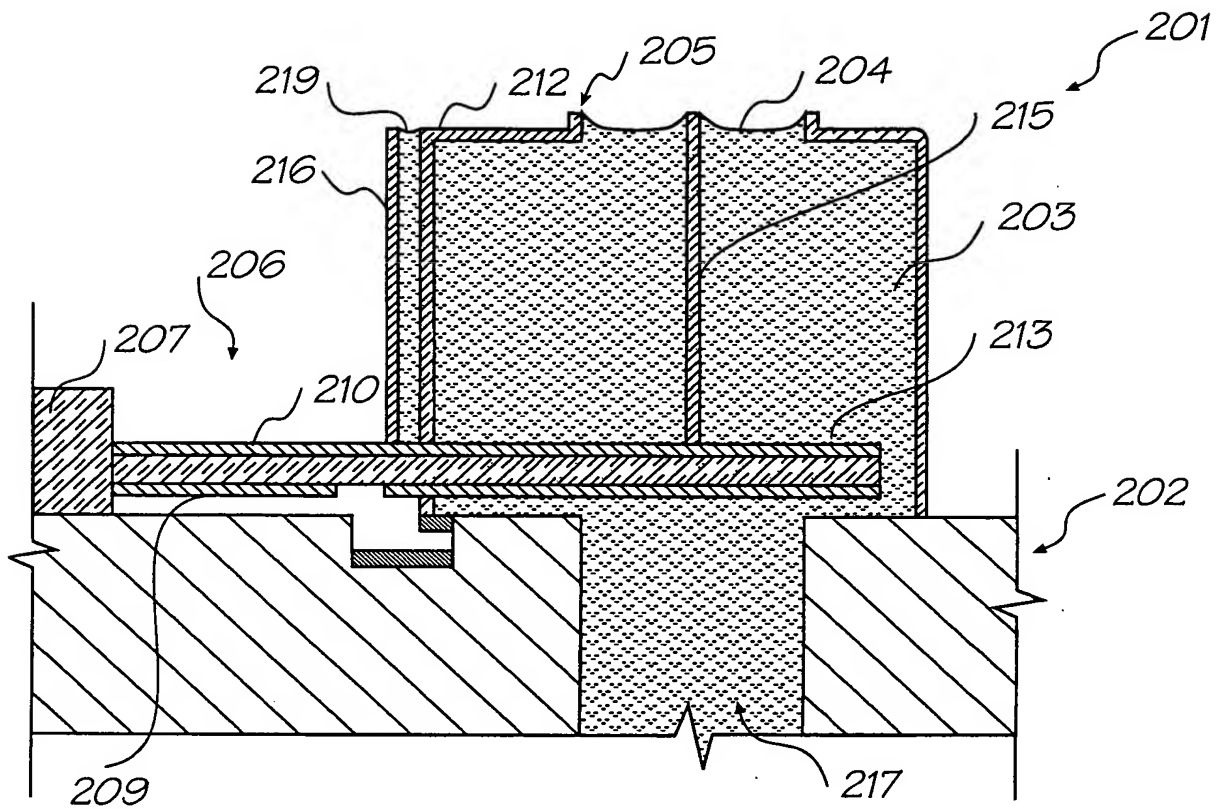


FIG. 104

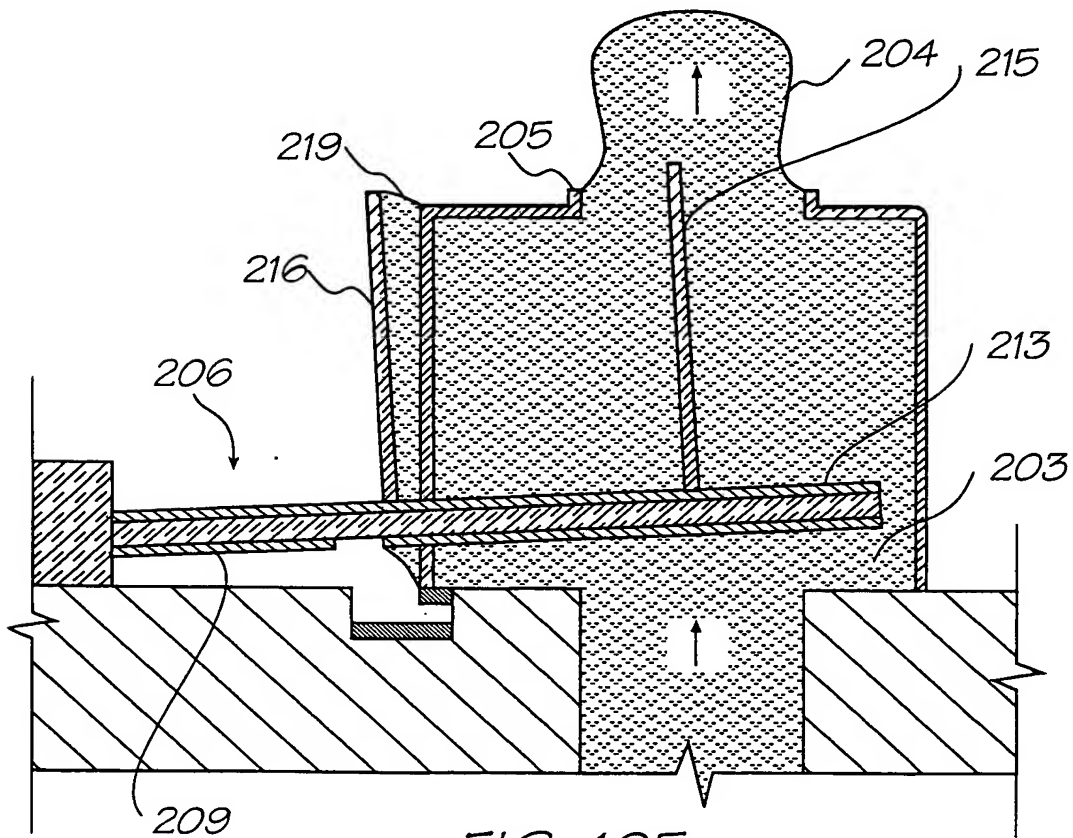


FIG. 105

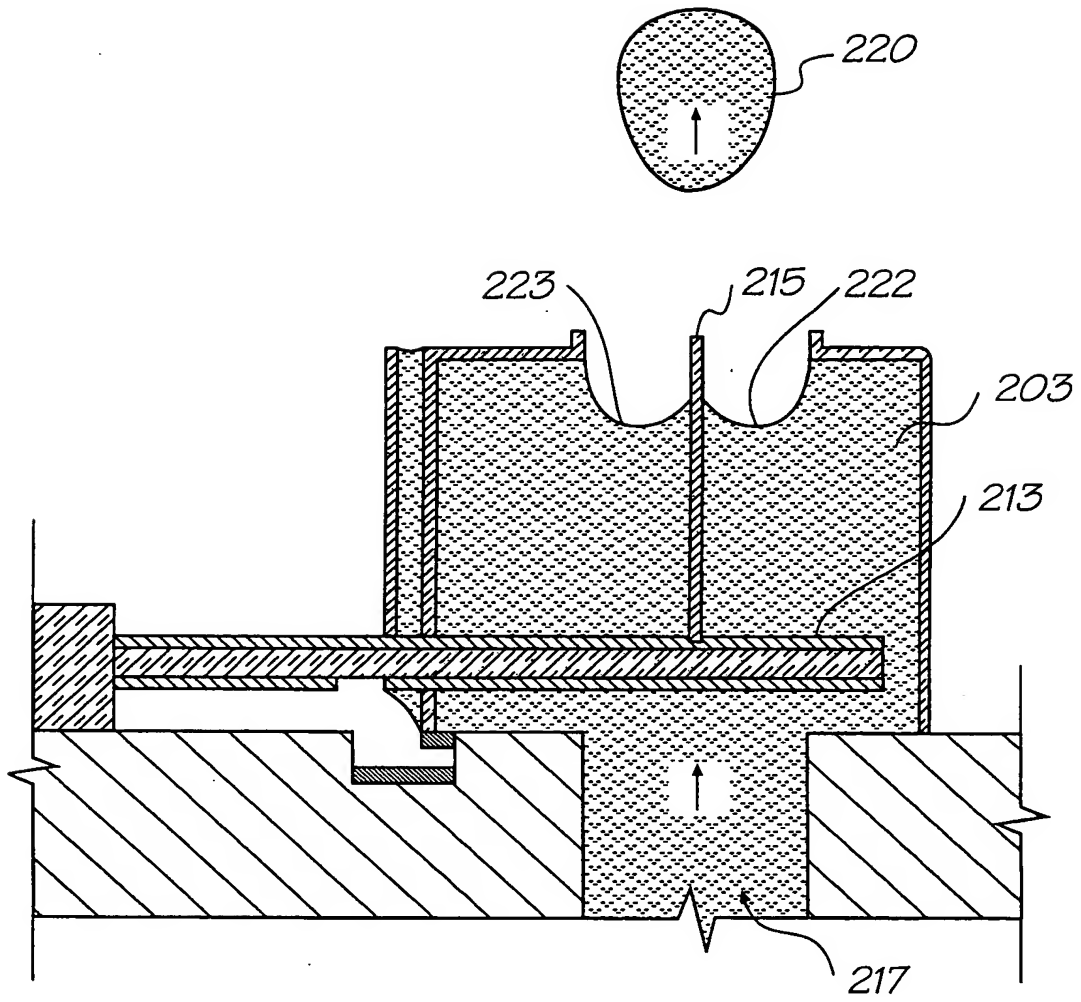


FIG. 106

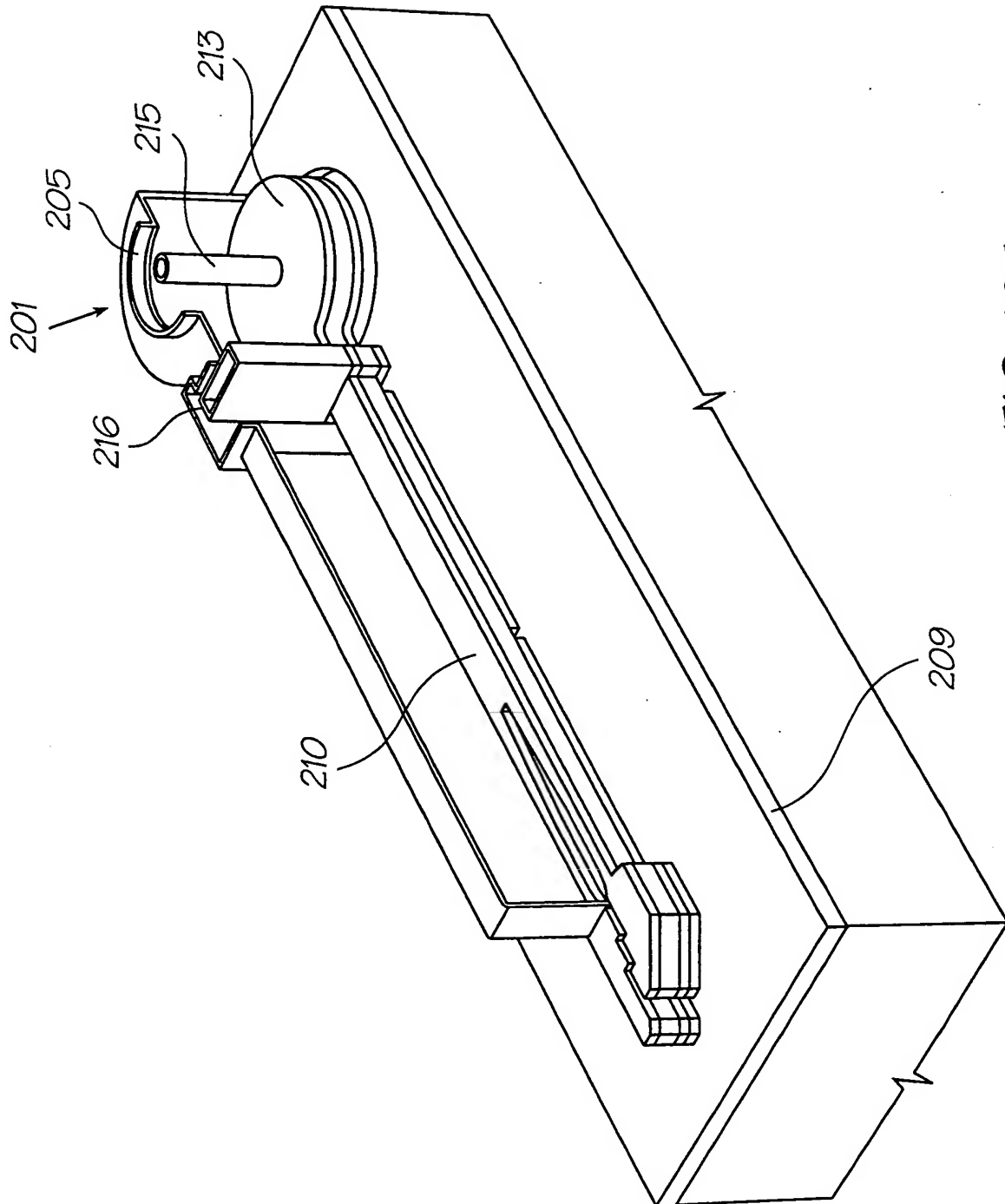


FIG. 107

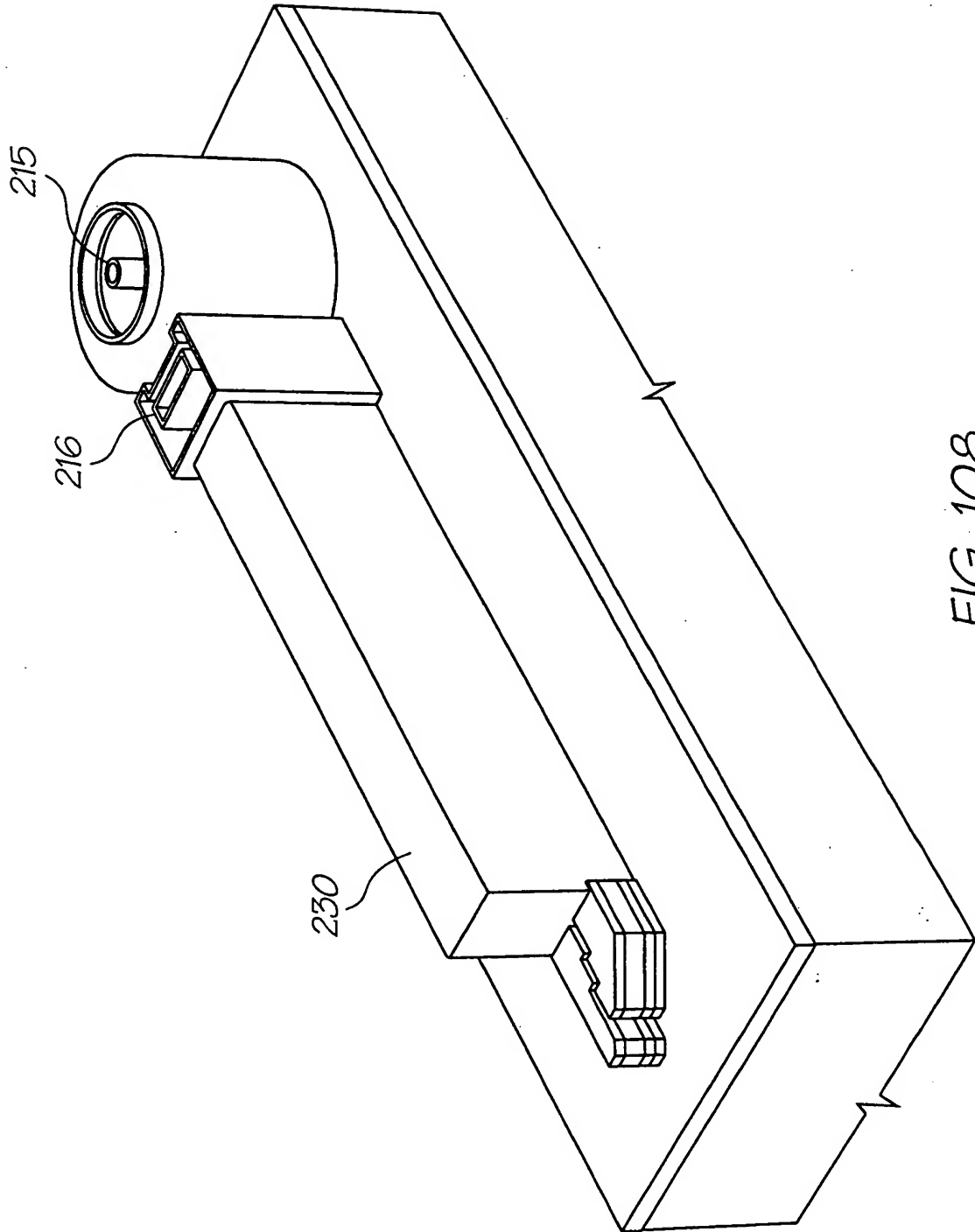


FIG. 108

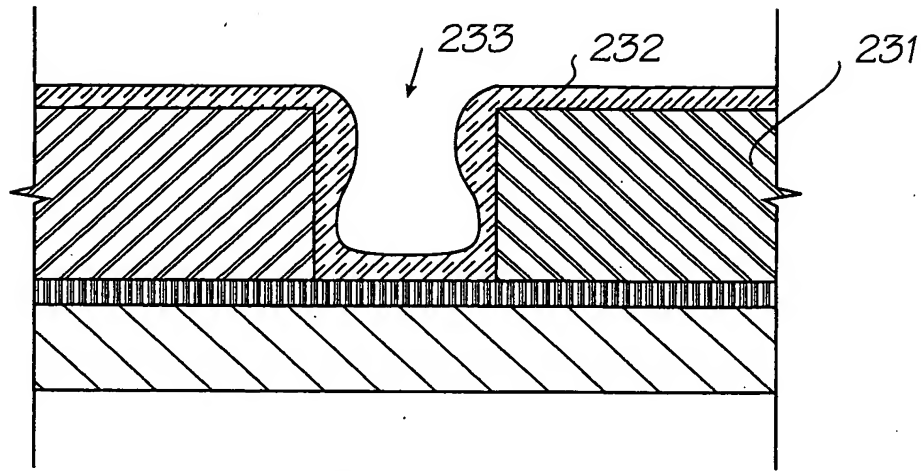


FIG. 109

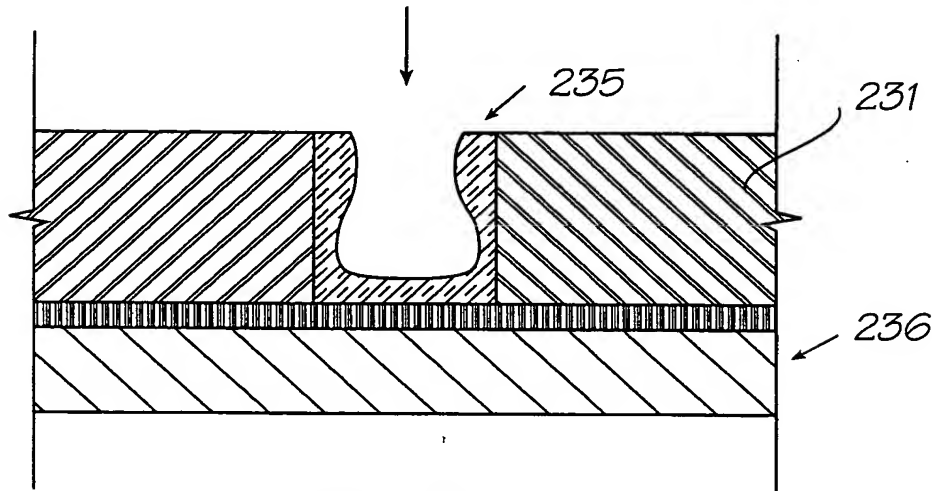


FIG. 110

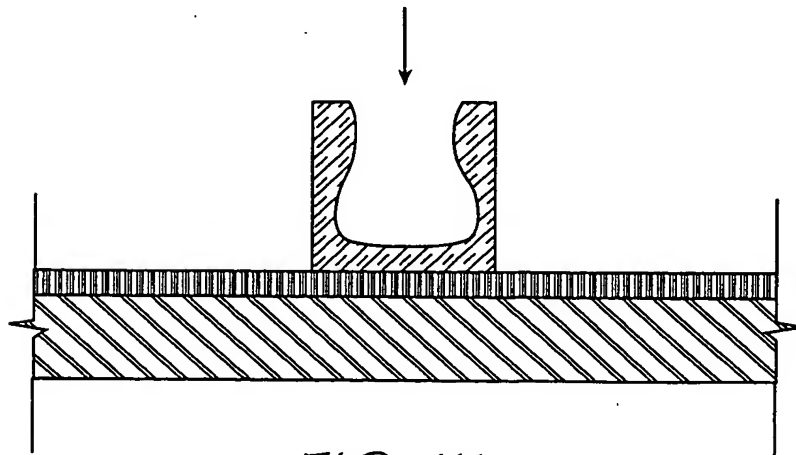


FIG. 111